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ABSTRACT

This elementary curriculum is a vehicle to provide manipulative activities that reinforce academic skills through meaningful, relevant, activity-based awareness of modern society. The twenty-six activity plans included in the curriculum place a major emphasis upon realistic or concrete experiences that deal with the manipulation and exploration of materials, tools, and processes. Among the activity plans included are (1) All American Popcorn, (2) Building Contractors Construct a Wren House, (3) Flower Cube on the Assembly Line, (4) Planter Box, and (5) Wooden Coasters. Each activity plan follows a typical format: activity title, area titles and major concepts, description of activity and enrichment, related careers, alternate activity, supplies, equipment, activity procedures, followup ideas, evaluation, health and safety procedures, tips to the teacher, and content material. A final section contains seven additional activity ideas. The game directions for nutrient cards and a permission letter are appended. (LRA)

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Activity Based Curriculum for Elementary Education

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Additional Activities

K-6

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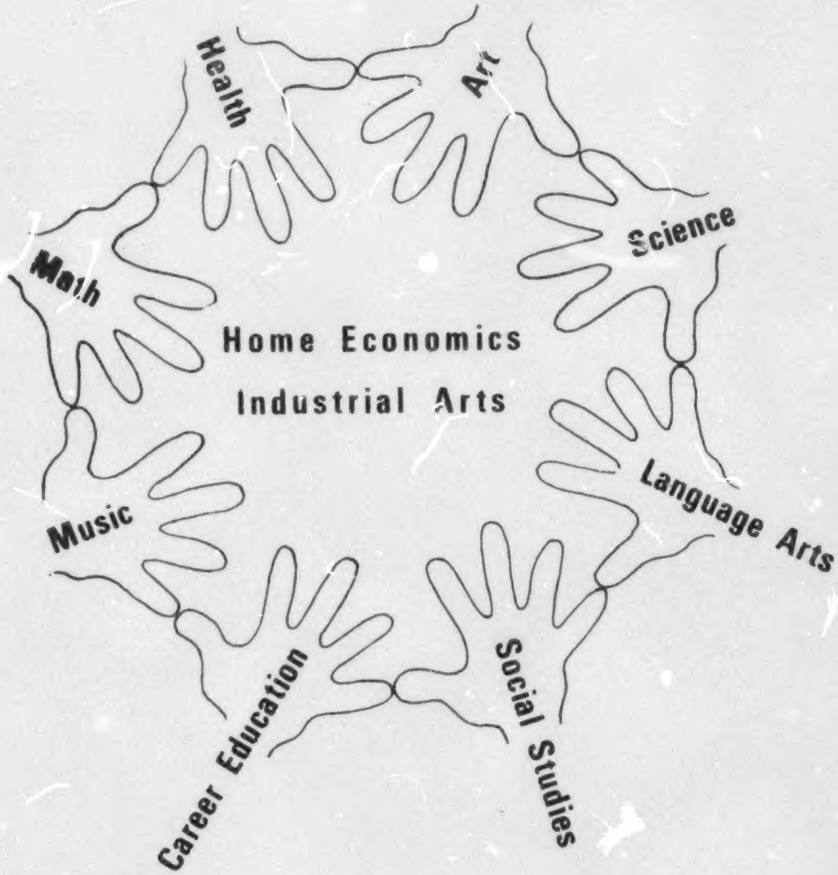
Health
Art
Science
Math
Home Economics
Industrial Arts
Language Arts
Music
Social Studies
Career Education

Hands-on Approach

wichita public schools
wichita, kansas

Activity Based Curriculum for Elementary Education

PREFACE

Each child engaged in elementary education activities is gaining skills and developing attitudes which will affect his/her lifestyle at the close of his/her educational commitment. The essential long-range goal for which each child is preparing is the provision of the three basic needs of all persons: food, shelter, and clothing. There are also many cultural aspects which will affect a child's future lifestyle, such as: home, family, occupation, religion, politics, education, economics and leisure activities.

After persons have satisfied their basic "needs" in today's society, they develop a list of "wants" which will make their lives easier and more pleasurable. This necessitates better or additional jobs within the family as a means of acquiring additional monetary rewards. As a result, a wider diversity of occupational training and life-preparation is required.

Activity Based Curriculum for Elementary Education is a vehicle to provide manipulative activities that enhance the elementary academy in all areas. Through the ABC/EE program, elementary academic skills are reinforced through meaningful, relevant, activity-based awareness of modern society. Under this plan, each student, regardless of sex, race, ability, or age, receives an interdisciplinary, psychomotor, manipulative experience which enhances cognitive concepts. Hands-on activities provide the student with a positive affect for learning. ABC/EE plans for all students to gain some degree of success, and educators agree that success breeds success.

In order to prepare individuals for a highly-industrialized society, a study of that society and its technology should be a part of the school curriculum at all levels. Each level should reflect personal goals, levels of specificity, and expectations, which can be aligned with the unique needs of each individual. Although not all-inclusive, the following are three of the basic educational needs of children in today's schools: (1) to develop an understanding of self; (2) to discover the opportunities and challenges presented by technology and social change; and (3) to develop talents for solving problems in the family and in the technological world.

Public education in the United States is committed to a general education that will develop the full potential of all children. Learning, for the most part, has been oriented toward the verbal and symbolic; teaching has been through the promotion of abstract ideas.

ABC/EE activities place a major emphasis upon realistic or concrete experiences that deal with the manipulation and exploration of materials, tools, and processes. The program gives children actual experiences with technology and living skills. They face and solve problems in a realistic setting. Thus, as learning becomes meaningful to children, and relevant to their real needs in the changing environment, school takes on a whole new meaning. Children have a natural curiosity about the world around them. Therefore, it is logical that an elementary program should capitalize on this natural desire to discover things. If the student is encouraged and nurtured in this desire to discover, it is easier to lead the student to read and write.

Students who are immersed in learning through all of their senses will reap benefits from the total curriculum. Over one hundred years ago, Professor John Dewey stated:

> A large part of the educational waste comes from the attempt to build a superstructure of knowledge without a solid foundation in the child's relation to his social environment. In the language correlation, it is not a science, or history, or geography that is the center, but the group of social activities growing out of the home relations. It is beginning with the motor rather than the sensory side . . . The true way is to teach them incidentally as the outgrowth of the social activities at this time.
>
> (quoted in History of Manual and Industrial Education 1870 to 1917, by Charles Alpheus Bennett, page 489)

When one thinks of learning from experience and of doing as learning, where in the school program does one find better illustration than in the teaching methods and learning strategies practiced in well-structured technology and family living programs?

Industrial technology is the knowledge of the techniques by which man has created his world: what man knows about and does with materials, the environment he has created, his ability to change his natural environment, and his replacement of muscle power with machines and energy. Home economics education, a people oriented discipline, deals with self-discovery, individual maturation, management of human and material resources, as well as meeting the more commonly regarded basic needs of individuals for food, clothing and shelter.

For man to study this vast body of knowledge, it must be organized. Boundaries, as well as interrelationships, must be identified, and the knowledge itself must be structured in order to facilitate both the teaching process and the learning process. Recently, elementary schools have started to look at the use of technology and home economics not only as a tool for instruction but also as a content base. Although these developments have added significantly to the usefulness of the knowledge referent for curriculum development, they should not replace the basic academic referents.

The study of technology and living skills in the elementary school can be a natural outgrowth of learning within any unit of instruction. Each teacher or system should select an approach appropriate to the individual situation, and utilize this activity program as time, staff and facilities allow.

ABC/EE developers view education as being different from skill acquisition. The program is dedicated to using manipulative activities to interrelate the higher levels of the psychomotor, cognitive, and affective domains. These activities also reflect: (1) humanization of instruction for the student; (2) career education concepts and philosophy; and (3) an interdisciplinary approach by which students may construct parallels between all areas of education and the real life world. Toward this end, the ABC/EE program is a meaningful component in the elementary curriculum.

ACKNOWLEDGEMENTS

Curriculum development is a complex and challenging task. It is possible only because of dedicated persons sharing ideas, hard labor, and, indeed, dedicated persons sharing of "self." It is impossible to name each agency or each individual throughout the Wichita school system who has contributed indirectly to the *Activity Based Curriculum for Elementary Education* (ABC/EE) *Project*. However, the persons and agencies that have contributed directly to this project are as follows:

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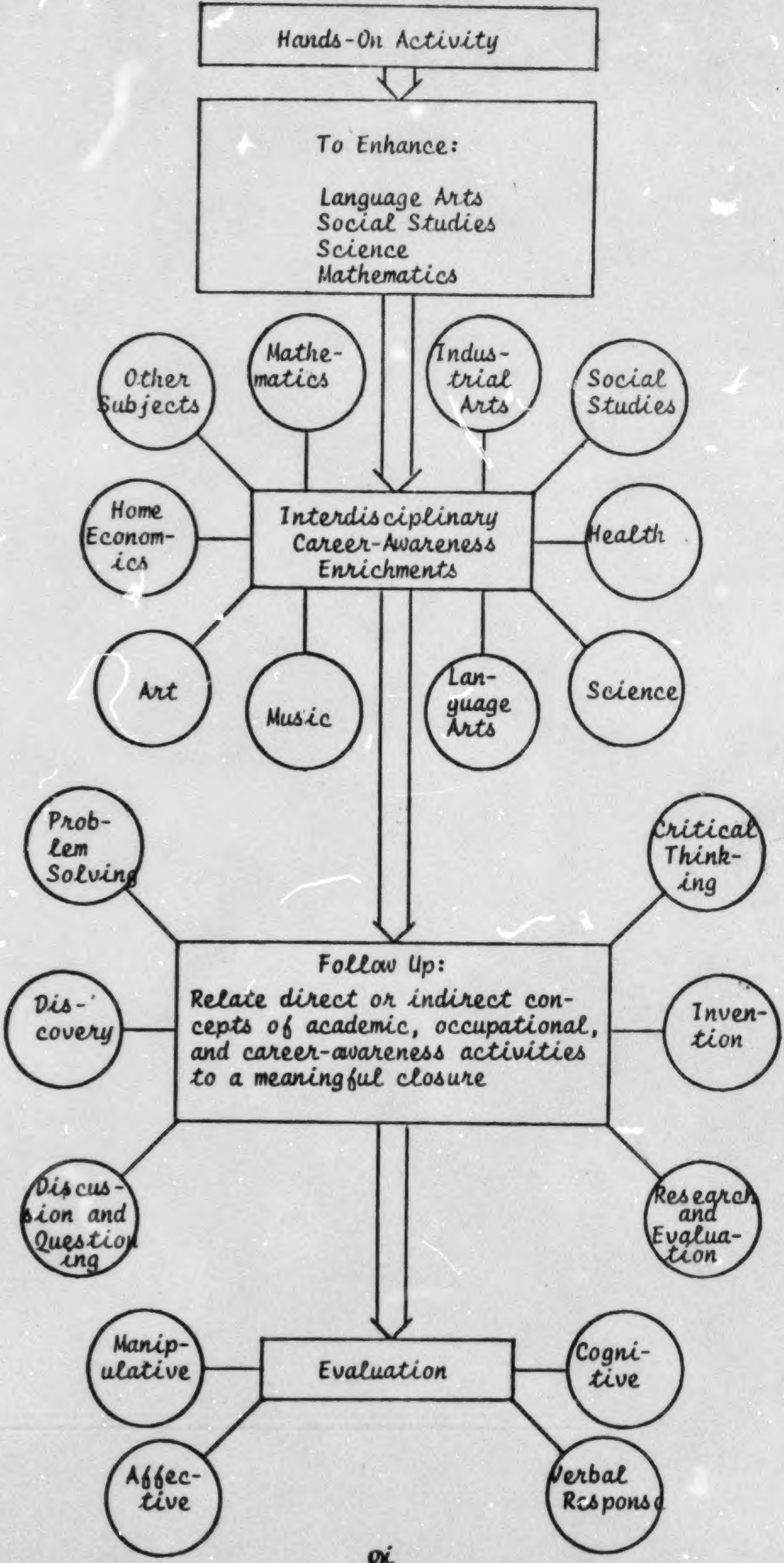
The A3C/EE Project


Hands-On Activity
To Enhance:
Language Arts
Social Studies
Science
Mathematics
Other Subjects
Mathematics
Industrial Arts
Social Studies
Home Economics
Interdisciplinary Career-Awareness Enrichments
Health
Art
Music
Language Arts
Science
Problem Solving
Critical Thinking
Follow Up:
Relate direct or indirect concepts of academic, occupational, and career-awareness activities to a meaningful closure
Discovery
Invention
Discussion and Questioning
Research and Evaluation
Manipulative
Evaluation
Cognitive
Affective
Verbal Response

HOW TO USE THIS GUIDE

*This guide is designed to help teachers make intangible concepts more tangible.

*Familia[illegible] yourself with the preface before looking at the activities.

**This material should not be used as a separate activity but should be fused into the existing curriculum. Relate the activity to as many disciplines as possible.*

*Use the related activities according to your normal classroom schedule.

*Completely read the activity before presenting it to the students. Ask industrial arts, home economics, career education, or fine arts specialists to help your organize the room, and acquire and prepare supplies and materials.

*Every student should be involved in the program, not just a selected few.

*Student activity sheets, evaluation sheets, games, etc., within this guide may be easily duplicated for use in the classroom.

*Allow ample time for preparation.

*Be safety-minded.

*Be prepared for a high level of activity.

*Do not expect skill perfection, but be willing to recognize, prepare for, and accept the individual student's level of ability and performance.

*Be complimentary of students' accomplishments.

*Accept students' challenges, and be flexible.

*Use only metric measurement in the classroom. Do not use conversion.

*Involve parents and community resources in the program.

*Most of the references on the resource sheets can be checked out at the ABC/EE office.

*Follow-up discussions and activities are keys to maximum effectiveness.

*Permission to use tools and equipment must be given by parent or guardian. The permission letter should be filed for later activities.

TABLE OF CONTENTS

Preface

Acknowledgements

Project Schema

How To Use This Guide

Table of Contents

Activity Plans

1. A French Buffet or Tour The World Buffet
2. All American Popcorn
3. A Pot of Soup or Chowder
4. Bread and Butter
5. Building Contractors Construct A Wren House
6. Decorations for Winter Festivals
7. Dip That Vegetable
8. Drafty Crack Critters - Energy Savers
9. Fall Pumpkin Adventures
10. Finger Gelatin Snacks
11. Flower Cube On The Assembly Line
12. Going Somewhere? Use a 2 x 4 Vehicle!
13. Hammers, Nails, and Wood - String A Design
14. Hanging Plant Holder Factory
15. Homemade Bath Salts
16. Metric Fun Events for Five Year Olds
    -A Service Project by The Sixth Grade-
17. Nail Flowers Plaque

18. Pizza Assembly Line

19. Planter Box

20. Recycled Limb Makes A Bird Feeder

21. Stitch A Picture

22. Wall Story Plaques

23. What Can We Do With A Pineapple?

24. Wooden Book Cover

25. Wooden Candleholder

26. Wooden Coasters

Additional Activity Ideas

Ice Cream Delight

Kite Making

Printing - Set That Type

Shape Cookies

Solar Hot Dog Cooker

Whose Bones? Making Life-Size Skeletons

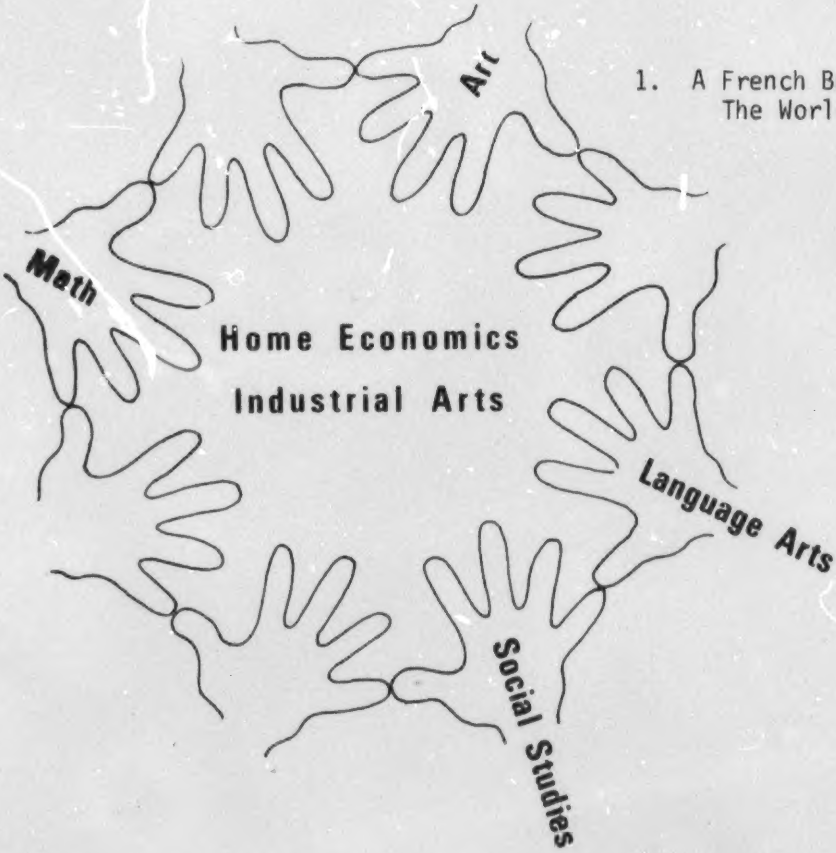
Yum Yums - Uncooked Candy

Appendix

Game Directions For Nourish Cards

Permission Letter

Recycled Equipment and Supplies


Art
Math
Home Economics
Industrial Arts
Language Arts
Social Studies

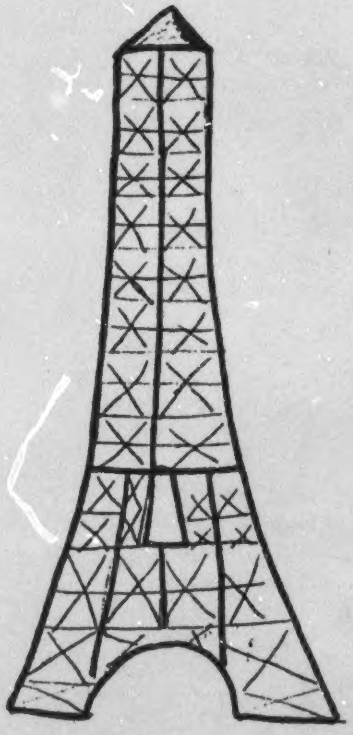
1. A French Buffet or Tour The World Buffet

Hands-on Approach

wichita public schools
wichita, kansas

ABCE

Activity Based Curriculum for Elementary Education



ACTIVITY TITLE:

A French Buffet or Tour The World Buffet

AREA TITLES AND MAJOR CONCEPTS:

Art
  Creativeness in decorations

Language Arts
  Following directions
  Vocabulary
  Reading skills

Math
  Metric volume measurement
  Dividing portions

Social Studies
  French culture
  French contribution to American Foods
  Committee work

DESCRIPTION OF ACTIVITY AND ENRICHMENT:

Student groups will plan, prepare, and serve a French buffet. The students will explore the many American food terms that have a French origin.

RELATED CAREERS:

Restaurant Manager, Travel Agent and Guide, Government Diplomat, Foods Industry, Cookbook Publisher

ALTERNATE ACTIVITY:

On pages 10 to 13 are plans and substitute recipes for: *Tour The World Buffet,* changing the social studies major concept to cultures around the world.

SUPPLIES:

- Grocery items for recipes selected
- Paper plates
- Napkins
- Hot cups

EQUIPMENT:

FRENCH BUFFET

Macaroons
- Mixer or egg beater
- Mixing bowl
- Metric measuring cup
- Small container for egg yolks
- Oven
- Hot mitts
- Measuring spoon
- Rubber scraper
- Cookie sheets - 2
- Small spoon
- Pancake turner
- Egg separator tool

Peanut Butter Fondant
- Mixing bowl
- Rubber scraper
- Metric measuring cup
- Wooden spoon
- Serving tray
- Table knife

Croutons
- Paring knives
- Chopping boards
- Small saucepan
- Hot plate
- Oven
- Hot mitts
- Metric measuring cup
- Measuring spoons
- Wooden spoon
- Rubber scraper
- Serving bowl

Cacao Au Lait (Hot Chocolate)
- Large mixing bowl
- Wooden spoon
- Metric measuring cup
- Measuring spoon
- Storage container-large w/lid
- Dipper - approximately 50 ml (recycled scoop from sweetened soft drink mix)

Hor d'oeuvres
- Paring knife
- Strainer and container for juice
- Table knife
- Serving tray
- Chopping board

Clean-up Center
- Dish soap
- Hand soap - paper towels
- Tea towels
- Disposable dishcloth
- Plastic dish pans
- Dish drainer
- Tray for under drainer
- Liquid bleach
- Plastic trash sack
- Scouring pad

NOTE: See Alternate Activity "Tour The World Buffet" recipes for equipment list (pages 11 to 13)

ACTIVITY PROCEDURES:

1. Along with the study of France, use the sheet "The French Influence on U.S. Foods" (page 7) to introduce food customs and to stress the importance of the French on our food habits and terminology.

2. Have students be on the alert for other food terms that are of French origin. Use a collegiate dictionary to check out origin.

3. Plan a class buffet of foods which have a title of French Origin. Suggestions are on pages 8 and 9.
   a. Divide into small groups (committees) and have each select a recipe.
   b. Each committee also is responsible for another part of the buffet such as invitations to guests, table decorations, favors, table arrangement, and room decorations.
   c. Have each group make a list of equipment they will need in food preparation. Write this on the back of the recipe.

4. In advance of preparation:
   a. Discuss measuring in milliliters (ml) and finding grams on packages. Ask students to look for metric measurements on packages used.
   b. Demonstrate using a knife and chopping board. Instruct students in safety for knives (page 5).
   c. Discuss serving buffet style and manners that will be needed.
   d. In advance, have each student silently read their recipe ingredients and directions. Answer questions on directions.

5. Suggested procedure for preparation of food is to have a grocery table and an equipment table with trays. Have one group at a time at each table putting equipment or groceries on a tray. These groups will then go to another table that has been assigned to them for preparation of their recipe. While groups are waiting to start or during baking time, they could work on decorations, etc.

6. Set up buffet table for the tasting party. Enjoy your results!

7. Send home Parent Letter (page 14). Have available recipe sheets; some students may wish to copy recipes.

8. Remind the students that the title of each food prepared was of French origin. Discuss other terms we use that are also from France. What is meant by the phrase--American Melting Pot?

9. Discuss the metric measurements found on cans, boxes, and jars used in food preparation.

PLEASE RECORD ALL BRAINSTORMS.

FOLLOW UP IDEAS:

Have students bring in and report on recipes, pictures, and articles related to the French activity as they see them in newspapers, magazines, etc.

Acquire several restaurant menus that features a variety of foods. In a learning center, have students list the food terms that originated from various nationalities. Use a collegiate dictionary to check origin.

Write letters to travel agencies and embassies requesting information about countries.

Have a show of traditional dress or ceremonial costumes.

Conduct research on handcrafted items that are special to various countries.

Compare the price and seasonings of commercial croutons to ones made in class.

Visit a local museum to see paintings from other countries.

Make a supermarket survey of foods in common usage that are primarily imported from other countries; examples are coffee, chocolate, Swiss cheese, tea, coconuts, and bananas.

Make a classroom listing of people that are involved in getting these foods to our local grocery. Point out that each gets a share of the consumer price.

Pick out ingredients from recipes for practice in classification of foods in Basic Four Food Groups.

EVALUATION:

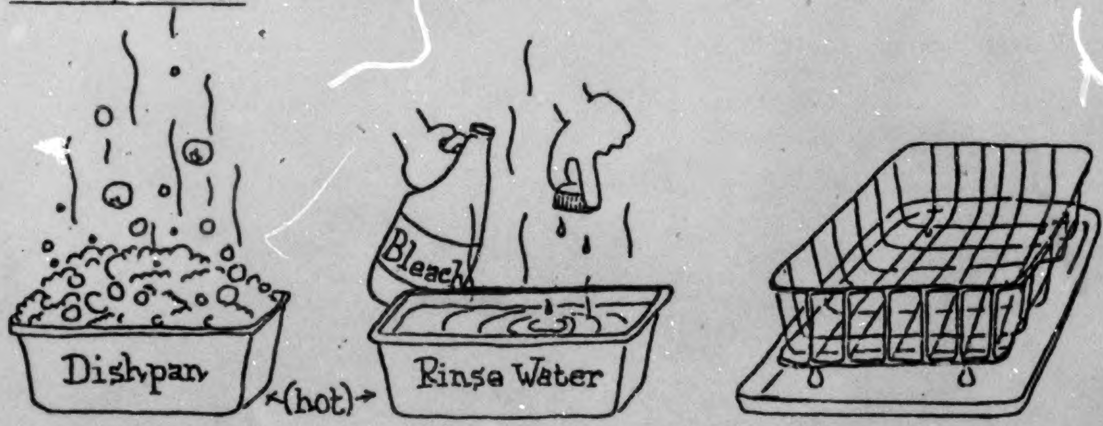
Have the students write sentences, using the titles of the foods prepared in the classroom. Have volunteers read some of their sentences in class, with class members listening to their usage of the terms. These sentences may be personal or factual.

(Exception: Cacao Au Lait is French, not English, so would not be in the common usage).

17

HEALTH AND SAFETY PROCEDURES:

1. Wash hands before handling food.
2. Make sure that all work surfaces are clean.
3. Use wooden spoons in cooking to prevent the spoon from getting hot.
4. Use dry pot holders when pans are too hot to touch.
5. Turn handles of pans on the hot plate so they will not be knocked off.
6. Be careful not to touch the sides of the broiler-oven; it will get hot.
7. Be sure to turn off and unplug appliances when finished.
8. Do not handle electrical appliances with wet hands.
9. Paring knives are sharp. Handle carefully. Cut on a chopping board. Do not place sharp knife in dishpan. Hold the knife while washing and rinsing.
10. Wipe up spills immediately to prevent falls.
11. Clean Up Station



Cut disposable dish cloths in half.

Carry clean, warm water to clean-up station in plastic jugs to prevent spills.

Have tea towels available for drying the dishes when air drying in the drainer is not possible.

Add one capful of liquid bleach to the rinse water for sterilization of the dishes.

Clean up is part of the activity and should be planned with the class.

TIPS TO THE TEACHER:

1. The fondant may be used to make bonbons. To make bonbons, melt 170 g package (6 oz.) semi-sweet chocolate chips and 20 g paraffin in a medium height can, such as a peanut can, in 1 cm depth of hot water in an electric skillet. Fondant balls must be chilled. Stick toothpick in balls and dip in chocolate. Place on wax paper to harden. CAUTION: Chocolate must be melted over low heat. Do not use lid on skillet.

2. If bonbons are not made, fondant balls may be flattened with a fork, thumb or glass.

3. Other seasonings can be used in the croutons recipe, such as 1 t onion salt.

4. Cacao Au Lait is French, not English. All of the other recipes on page 8 and 9 have English titles with a French origin.

5. Students should be given recipes in advance of preparation to read ingredients list and directions (pages 8 and 9), plan equipment needed and turn in grocery list.

6. To make a French sidewalk cafe, hang awnings over the serving table and guest table. String heavy wire across one end of the classroom, out about 1.5 cm from the end of the wall. Fasten printed sheets to wall and drape over wire.

7. French menus could be made for each person, giving the name of foods to be served and prices.

8. Use only metric measurement in the classroom.

9. Have spoons in canisters at the supply table, such as in sugar.

10. Macaroons are the most difficult recipe in the French activity.

11. Group student desks by 4's, facing each other to carry out the cafe theme for serving.

12. Use a recycled powdered soft drink scoop to dip the hot chocolate mix into hot cups. Use 1 dipper per cup.

13. Discuss ways of using the leftover egg yolks and pineapple juice at home.

14. Allow sufficient time for preparation. Groups will vary greatly in amount of time they need to complete a recipe. You might plan to cook in the morning and serve in the afternoon or the following day. Discuss food storage.

THE FRENCH INFLUENCE ON U.S. FOODS

The wonderful sauces, delicate souffles, delicious pastries, and interesting soups that come to us from France are famous around the world.

Breakfast in France is almost always *cafe au lait*, coffee with hot milk, served with *brioche* or a *croissant*, typical French breakfast pastries or rolls. Since breakfast is so light, lunch at about 12:30 or 1:00 is an important meal of several courses. Many families simply serve a light soup accompanied by their freshly baked French bread in the evening from which comes the term *souper* (supper).

Paris has an unbelievable number of restaurants--literally thousands of them. In the vast majority of Parisian restaurants, it is practically impossible to order the equivalent of an American light lunch. Most people order a regular meal, course by course. A custom in France is that of placing the *menu* and the *carte* in front of or outside the restaurant so that you can see (before you enter) what the specialties are and what you will be expected to pay for them.

Most offices, museums, and places of interest to tourists close for about two hours in the middle of the day, so there is certainly nothing to hurry you away from the full enjoyment of your lunch. Even businessmen eat a leisurely two-hour lunch.

Most Frenchmen believe in what is called the separation of courses. That is, each dish is eaten separately. Thus, it is next to impossible to get a salad served with your meat or coffee with dessert at a restaurant.

Many terms used in American recipe books and in our restaurant menus have a French origin. Below are some words that you might recognize.

a la carte
biscuit
bonbon
bouillon
buffet
cafe
casserole
chiffon
consomme
crepe

croquette
crouton
dessert
eclairs
fondant
fondue
hor d'oeuvres
legume
macaroon
meringue

omelet
parfait
praline
puree
restaurant
rotisserie
salad
sauce
saute
souffle

MACAROONS

3 large egg whites
Few grains of salt
5 ml vanilla
250 ml sugar
600 ml coconut

1. Separate egg whites and yolks, putting whites in a mixing bowl. Store yolks in refrigerator. *Use an egg separator tool, if available.*

2. Add salt and vanilla to egg whites.

3. With mixer, beat on high speed until peaks will form when mixer is stopped and beaters are pulled up.

4. Next, while beating on high, add sugar; a little at a time. Beat until stiff.

5. Take out mixer and carefully stir in coconut.

6. Grease two cookie sheets. Drop cookies with a small spoon, making small mounds about 3 cm apart. Make about 50 cookies.

7. Bake at 325°F (160°C) 15 to 20 minutes.

8. Remove from cookie sheet while warm.

PEANUT BUTTER FONDANT
(Makes about 40 small balls)

1. In mixing bowl put:
   4 tablespoons butter (1/2 stick)
   300 ml powdered sugar
   150 ml peanut butter

2. Stir and stir! Take a handful, squeeze it. Do it again and again.

3. Roll a small piece into a ball. Make it about the size of a large marble.

4. Put balls on a small tray covered with wax paper. Chill.

NOTE: If sticky, add more powdered sugar.

HOR D'OEUVRES

Create a tray of appetizers.

You will be given cheese spread, sweet pickles, pineapple tidbits, toothpicks, and crackers. Select one additional item.

Make a list of the items you are using. Write the metric amounts from the jar, can, or box, when you fix the hor d'oeuvres.

CROUTONS

Melt 2 sticks (200 g) margarine on very low heat and stir in 25 ml salt, 10 ml seasoned salt, and 1 ml garlic powder.

Cut 1 loaf of white, day-old bread into cubes, using cutting board. Do not mash bread.

Put bread cubes in shallow baking pans. Slowly pour seasoned margarine over cubes. Toss lightly.

Bake at 325°F (165°C) for 45 minutes, stirring occasionally. Croutons should be toasted and dry.

HOT CHOCOLATE
(French - Cacao Au Lait)

725 g box of dried milk (2.25 L)
450 g container of instant chocolate (1 lb.)
185 g jar powdered coffee creamer (6.5 oz.)
200 ml sugar
2 ml salt
Styrofoam cups

Put all ingredients in large container. Stir until well blended; store in air-tight jar or container.

To make the drink, put 50 ml in hot cup. Add hot water.

Makes approximately 50 servings. Check the boxes and jars you used for metric measurements. Copy these measurements.

ALTERNATE ACTIVITY:

Tour The World Buffet

AREA TITLES AND MAJOR CONCEPTS:

Art
  Creativeness expression - decorations

Language Arts
  Following directions
  Vocabulary
  Reading skills

Math
  Metric volume measurement
  Dividing portions

Social Studies
  Cultures around the world
  Committee work

DESCRIPTION OF ACTIVITY AND ENRICHMENT:

Student groups will plan, prepare, and serve a buffet with foods from several countries. The French activity procedures will be used; substituting recipes and changing major emphasis from France to world-wide cultures.

SUGGESTED RECIPES:

Beef Chow Mein (page 11) - China

Mediterranean Salad (page 13)

Croutons (page 9) or Macaroons (page 8) - France

Peanut Butter Bars (page 8) - West Africa

Hot Chocolate (page 9) - South America

BEEF CHOP SUEY

1. Put the following ingredients in a large crockpot:

   500 g (1 lb.) lean beef, cut into small cubes
   1 medium onion, chopped
   250 ml chopped celery
   1 medium green pepper, chopped
   2 ml salt
   1 ml black pepper
   1 can (305 g) cream of chicken soup
   1 can (305 g) cream of mushroom soup
   500 ml water
   50 ml soy sauce
   25 ml Worcestershire sauce

   Cook on high setting of crockpot (325°F or 165°C) for 2 or 3 hours.

2. Next, stir in:

   300 ml minute rice
   Cook 30 minutes to 1 hour longer.

3. Five minutes before serving, unplug and top with:

   Small can (#303) of chow mein noodles
   Leave on lid until ready to serve.

NOTE: This may be baked in a 4 L casserole dish in a oven. Stir occasionally.

Equipment Needed:
Large crockpot or 4 quart casserole and oven, paring knives, chopping boards, measuring spoons, can opener, rubber scraper, metric measuring cup, wooden spoon, oven mitts, water for washing vegetables, serving spoon.

康健的
"Healthful"

菜
"Vegetables"

米
"Raw Rice"

飯
"Cooked Rice"

肉
"Meat"

PEANUT BUTTER BARS
(Makes about 40 small bars)

1. In a mortar (mixing bowl) put:
   4 tablespoons butter (1/2 stick)
   300 ml powdered sugar
   150 ml peanut butter

2. Pound together with a pestle (wooden spoon).
   Take a handful, squeeze it! Do it again and again.

3. Roll a small piece into a ball. Make it about the size of a large marble.

4. Put balls on a tray covered with wax paper. Flatten slightly.

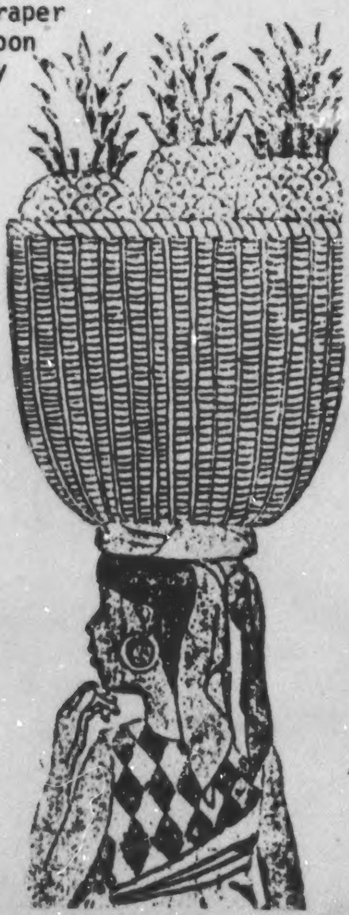
5. Chill.

NOTE: If sticky, add more powdered sugar.

Equipment Needed:
- Mixing bowl
- Table knife
- Metric measuring cup
- Rubber scraper
- Wooden spoon
- Small tray
- Wax paper

In Nigeria, 'chop' means food. One important crop in this tropical country is the groundnut, or peanut as we call it. Protein-rich groundnuts are eaten in many ways: raw, roasted, boiled, pressed into cooking oil, and ground into butter. They are also put into soups.

In Nigeria and other parts of West Africa, most people eat only one or two meals a day. During the rest of the day, they may stop at a snack shop or buy tidbits from a street vendor. For about a penny, you can buy a bar of 'Kanya' (peanut butter bar) from a street vendor.



MEDITERRANEAN SALAD

Cook:	2 packages (300 g each) frozen mixed vegetables, according to package directions.
Slice Thin:	125 ml scallions (green onions) 125 ml raw cauliflower 125 ml stuffed olives

Drain vegetables and combine above ingredients. Marinate the salad in the dressing for several hours in the refrigerator. Use a container that can be sealed, or cover with foil or plastic. Stir once or twice.

Dressing:	Combine in a jar and shake: 75 ml olive oil or salad oil 50 ml vinegar 10 ml salt 1 ml pepper 1 clove garlic crushed, or 1 ml garlic powder

Equipment Needed:

- Saucepan with lid
- Measuring cups
- Chopping boards
- Paring knives
- Wooden spoon
- Small jar with lid
- Measuring spoons
- Hot plate
- Oven mitts
- Water to wash vegetables
- Serving spoon
- Bowl or storage container

The housewife of biblical times in the Mediterranean area used the word "herb" for all of the green plants that were eaten. Potherbs were those that were cooked, and green herbs were those that were eaten raw. This salad contains both types of herbs.

POTHERBS
GREEN HERBS

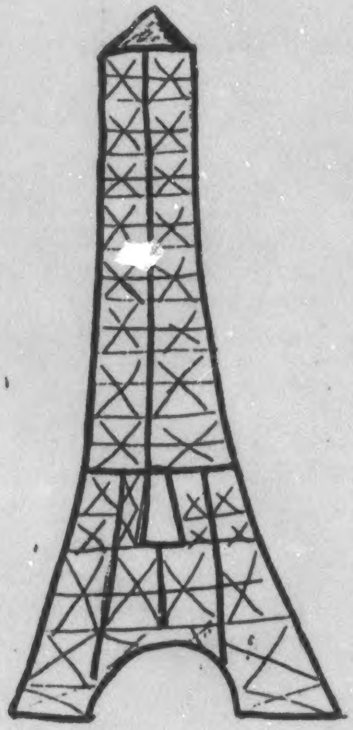
Dear Parent:

In Social Studies, we are studying about countries around the world.

Along with many countries, France has made important contributions to our American food. One example is the many common terms used by United States restaurants and cookbooks that are of French origin.

One of our social studies activities was a buffet. We used art, language arts, and math in this activity also. The foods prepared for our buffet were quite tasty. Your child can tell you about our buffet and some of the foods served.

Perhaps your family working together can try out a recipe for a food that was influenced by another country. We would be interested in hearing about the results in class.



RESOURCE SHEET

FOR THE TEACHER

International Foods Leaflets. Terre Haute, Indiana: General Housewares Corp, Cookware Group. (P.O. Box 4066). One set free.

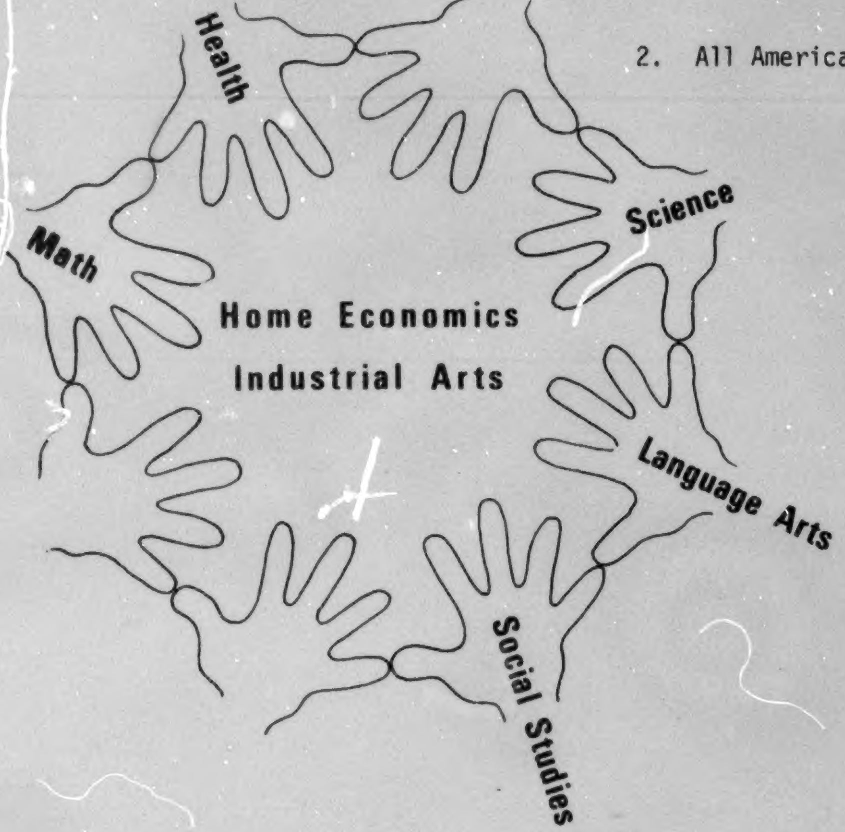
"Festive Foods From The American Melting Pot". Forecast For Home Economics. November 1976, page 21.

FOR THE STUDENT

Cooper, Terry Touff and Marilyn Ratner. Many Hands Cooking, An International Cookbook For Girls and Boys. New York: Thomas Y. Crowell Co., 1974. A book from US Committee for UNICEF.

That's a good one...
write it down!

2. All American Popcorn


Health
Science
Math
Home Economics
Industrial Arts
Language Arts
Social Studies

Hands-on Approach

wichita public schools
wichita, kansas

Activity Based Curriculum for Elementary Education

ACTIVITY BASED CURRICULUM FOR ELEMENTARY EDUCATION

ACTIVITY TITLE:

All American Popcorn

AREA TITLES AND MAJOR CONCEPTS:

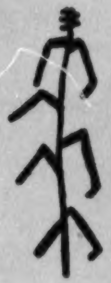
Health
  Nutritional snacks - popcorn balls
  made with peanut butter and peanuts
  from meat group

Language Arts
  Oral language development
  Reading and following directions

Math
  Metric volume measurement

Science
  Water in seeds
  Heating moisture
  Sensory development

Social Studies
  American Indians
  Consumer education



"INDIAN SYMBOL FOR CORN"

DESCRIPTION OF ACTIVITY AND ENRICHMENT:

While the corn is popping, students will describe sight, sound, and smell. If making popcorn balls, student groups contribute some of their popcorn to make a large class recipe of balls. The results of moisture being heated will be observed. The history of popcorn expands American Indian studies. Field research on homemade vs purchased will provide experiences in consumer education.

Required For This Activity:

The teacher selects the experiences appropriate for their class according to age and desired learnings.

RELATED CAREERS:

Scientist, Grocer, Teacher, Historian, Agriculturist, Concessionaire.

SUPPLIES: (Recipes on pages 9 , 10 and 11).

Popcorn
- 25 ml cooking oil per batch
- 100 ml popcorn per batch
- Salt shaker
- Paper cups for trying out popcorn

Double Peanut Popcorn Balls (Classroom recipe for 40 medium balls).
- 6 L popcorn
- 300 g roasted peanuts (11 oz)
- 375 ml sugar
- 375 ml light corn syrup
- 375 ml chunk-style peanut butter
- 10 ml vanilla
- Margarine (for greasing bowl or pan used in mixing popcorn balls)
- Wax paper

EQUIPMENT:

Popcorn
- Heavy saucepans and hot plate or popcorn popper
- Hot mitts
- Metric measuring cups
- Spoon for dipping popcorn
- Container of fresh popcorn
- Mixing bowl
- Container to collect popcorn for balls
- Liter measure

Popcorn Balls
- Saucepan 2 L (for syrup)
- Large container for mixing balls
- Metric measuring cups
- Measuring spoon (5 ml)
- Gram scale
- Wooden spoon
- Hot plate
- Rubber scraper
- Hot mitt
- Liter measure
- Small bowl of water

CLEAN UP:

- Dish soap
- Hand soap - paper towels
- Tea towels
- Disposable dishcloth
- Plastic dish pans
- Plastic jug
- Dish drainer
- Tray for under drainer
- Liquid bleach
- Plastic trash sack
- Scouring pad

ACTIVITY PROCEDURES:

1. Use Student Sheet (page 8) to explore the history, science, and nutrition of popcorn.

2. Set up a popcorn learning center in the classroom. Small student groups rotate in the center to pop corn. This provides experiences in measuring and following directions.
   a. Use a popcorn popper and Student Activity Sheet on Page 9, (or a saucepan may be used for intermediate grades with Student Activity Sheet on page 10).
   b. Each group saves 1 L popcorn if a classroom recipe of balls is to be made. At least six groups will be needed.
   c. Stress safety with hot pans and poppers.
   d. Talk about what they saw, heard, and smelled.

3. The teacher, with student aids, measure and cook syrup for popcorn balls. The teacher mixes the syrup into the popcorn. The recipe for balls is on page 11. Each student shapes a medium-size ball. Caution students about hot mixtures.

4. Send home Parent Letter (page 12).

5. Use some follow-up experiences in the popcorn learning center.

ALTERNATE ACTIVITY PROCEDURES:

1. Use Student Sheet (page 8) to introduce the activity.

2. Set a plastic dome popper on a small table or on the floor in the center of the room. Have the students sit in a circle. Pop a large popper of corn. (For a 6 quart popper, use 200 ml of corn).

3. While popping, ask for student word descriptions of sounds, smell, and sights. Ask the class: *What do you see on the dome? What causes the moisture or steam?*

4. Dip corn into paper cups for sampling. Ask the students to describe their popcorn to the class using complete sentences.

5. Use some follow-up experiences with corn.

FOLLOW UP:

Conduct experiments with the popcorn to demonstrate the property of water in seeds. For example:

1. Compare the number and size of kernels that pop from fresh popcorn to the number and size of kernels that pop from corn that has been dried in 200°F (129°C) oven for 1 1/2 hours. To compare size, measure 20 of the largest kernels in both groups in millimeter and find the average size of both groups. Count the number of kernels from each group that did not pop.

2. Demonstrate moisture condensing on a glass or lid placed over a heated pan filled with water. In a dry pan, place 5 or 6 popcorn kernels. Cover with the piece of dry glass. When the pan is heated and the kernels pop, water will again condense. Ask students to explain why water forms on the top.

3. Plant or sprout some of the fresh corn kernels and some of the oven-dried kernels. Is there a difference in the amount of time it takes to start growth? Count the number sprouted from each group.

Compute the cost of popping a liter of popcorn at home and compare this cost to purchasing it already popped, using a variety of locations to survey costs.

Compare the volume of unpopped corn to volume after popping. What percent of increase in size is this? What percentage of the kernels were left unpopped in the popper.

Popcorn today is a special variety grown just for popping. What other kinds and uses of corn are there? For example--corn oil and corn syrup used in this activity. Collect pictures of corn products to make a classroom collage.

Experiment with other grains to find out how they "pop." Conduct a grocery survey to identify ready-to-eat cereals that are made from "popped" grains.

Set an electric popcorn maker in the center of a large clean bedsheet, marked in pie shape sections. Assign students a section and have them at least 2 meters from the popper. Pop some corn without a lid. Watch how far it pops.

1. Before beginning, have the students estimate the longest distance any single kernel will go. Watch for the highest kernel.

2. Have each group count the number of kernels in their section. What section had the most kernels?

3. Measure the distances the corn popped in centimeters to see which is the farthest.

4. Figure the average distance kernels popped from the popper in each section.

5. Have a creative writing experience to describe the movement, sound, smell, etc., of the popcorn in action.

FOLLOW UP - Continued

Corn growing races will provide practice in measuring and keeping records. Each student gets 3 corn seeds, a pot, and some soil. The pot can be made from lunchroom milk cartons or paper cups. Each students has three weeks to grow his/her corn. It must be measured in mm every day and recorded. At the end of the 3 weeks, the student with the tallest plant wins. Serve popcorn as a reward for each student.

In a learning center, have students examine the properties of an ear of Indian corn--color, shape, weight, length, number of rows of kernels, number of kernels in a row.

Cut off kernels of dried ears of regular corn. Let children use stones to pound them into cornmeal. Make cornbread, using some of this ground corn with a flour muffin recipe.

Give each student a grain of popcorn. Ask them to write down all the words that describe it. Then give each student one popped grain. Have them write down words from what they see, feel, and smell. Have the students share some of their descriptive words with the class.

Have student groups create a new brand of popcorn...a new box for it...a character to sell it...a jingle that makes it the best seller. Actually design and build the boxes. This could be for popped or unpopped corn.

Have a guest speaker from a business establishment where popcorn and/or popcorn products are a large part of their business. Have the class make a list of questions in advance.

Use an Indian Song about corn (For example, see Resource Sheet-Burnett on page 14 .)

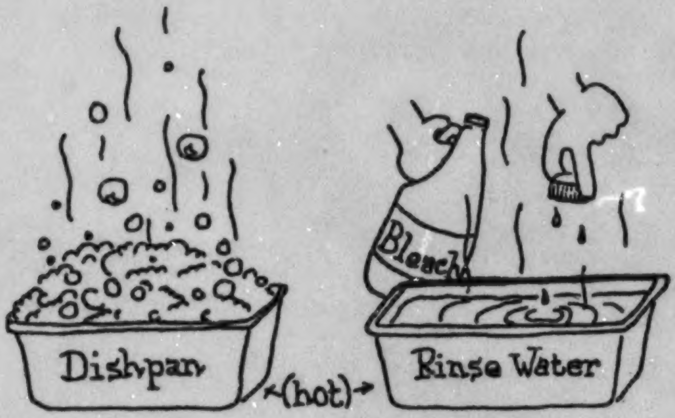
Divide the students into groups of five or six. Give the groups five minutes to decide how to put themselves together to become a popcorn popper. Don't forget that someone should be the popcorn. At a signal, all groups become the popper and pop the corn. Let any group that wishes show their popper to the class.

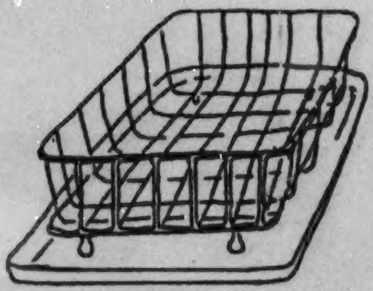
EVALUATION:

Have students record experiences and learnings on the Evaluation Sheet (page 13). The sheet could also be colored with crayons.

HEALTH AND SAFETY PROCEDURES:

1. Wash hands before handling food.
2. Make sure that all work surfaces are clean.
3. Use wooden spoons in cooking to prevent the spoon from getting hot.
4. Use dry pot holders when pans are too hot to touch.
5. Turn handles of pans on the hot plate so they will not be knocked off.
6. Caution students on handling hot mixture for balls too soon.
7. Be sure to turn off and unplug appliances when finished.
8. Do not handle electrical appliances with wet hands.
9. Have only small groups of students watching or using the oven or hot plate at one time to prevent accidents.
10. Wipe up spills immediately to prevent falls.
11. Clean Up Station





Cut disposable dishcloths in half.

Have tea towels available for drying the dishes when air drying in the drainer is not possible.

Add one capful of liquid bleach to the rinse water for sterilization of the dishes.

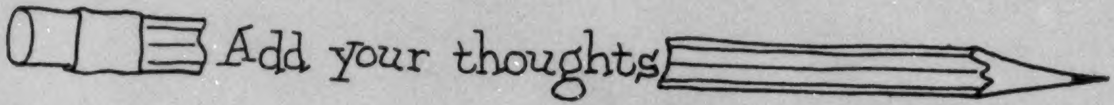
Clean up is part of the activity and should be planned with the class.

Carry warm water to the clean up center in recycled plastic jugs.

TIPS TO THE TEACHER:

(Write down pointers that would be helpful to you if you conducted this activity next year. Make notes as adventures progress).

1. When making popcorn balls, dip out small spoons of finished mixture onto wax paper for students to pick up and make balls. This mixture will remain pliable much longer than standard popcorn balls.
2. It works well to wet hands before shaping balls for this recipe instead of buttering. (For the traditional popcorn ball recipe, hands are buttered.)
3. Have the students, using the saucepan method, to read the Activity Sheet (page 10) before going to the center, as well as having the directions in the center.
4. An electric skillet can also be used in popping corn. Preheat skillet to 375°F (190°C) before adding oil and popcorn.
5. The 100 ml of popcorn will yield about 2 L when popped.
6. Students will enjoy hot popcorn, salted lightly. Butter adds fat and many calories--no nutritional value.



Student sheet

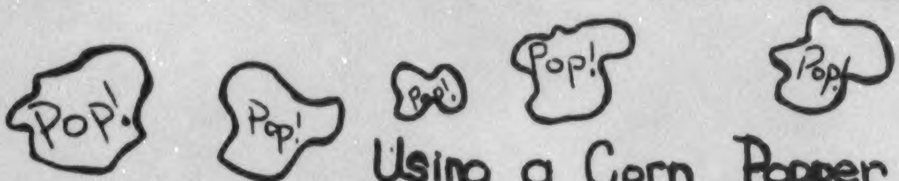
POP

Popcorn has a long and interesting history. No one is certain how old the fluffy white food really is, but scientists found pollen dust near Mexico City which is believed to be 80,000 years old. Archaeologists found popcorn kernels in Peru which were 100 years old and could still be popped. One of the first sights which Columbus saw when he reached the New World was San Salvador Indians peddling popcorn. The Indians believed that a demon lived in each popcorn kernel. The demon became so riled when his house was heated, that he blew up.

American Indians used many popping techniques and recipes. In 1612, Iroquois Indians in the Great Lakes area popped the corn in clay urns which they heated with hot sand. Indians even ate popcorn soup. After the Indians brought popcorn to the first Thanksgiving dinner, colonial housewives began making popcorn and served it with cream for breakfast. Popcorn was probably the first puffed cereal.

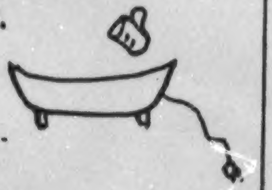
Today, scientists believe that when a popcorn kernel is heated, moisture in the kernel changes to steam. Steam takes up more space in the popcorn kernle than the liquid moisture. The hard covering around the popcorn kernel keeps the steam from escaping and causes pressure to build up in the kernel. Finally, enough pressure builds up in the kernel, and the kernel pops to many times its original size.

Popcorn is a popular snack. One cup of popcorn has only 40 calories when it is not buttered or sweetened with a coating. It contains small amounts of protein, vitamins, and fiber.

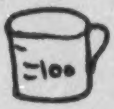

Pop!
Pop!
Pop!
Pop!
Pop!

Using a Corn Popper

1. Put 25 ml of oil into the popper.

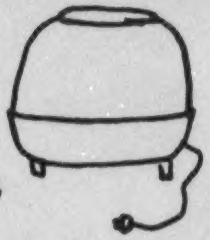


2. Measure 100ml of popcorn.



Pour into popper.

3. Place cover on popper.



Line up handles.

4. Plug in popper.

5. Watch and listen!

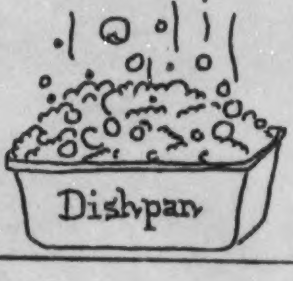
What words describe the sounds, smells and sights.

6. Unplug as soon as popping stops.

Ask for help in emptying the popper.

7 If your class is making popcorn balls, save 1ℓ of popcorn. Salt and enjoy the rest.

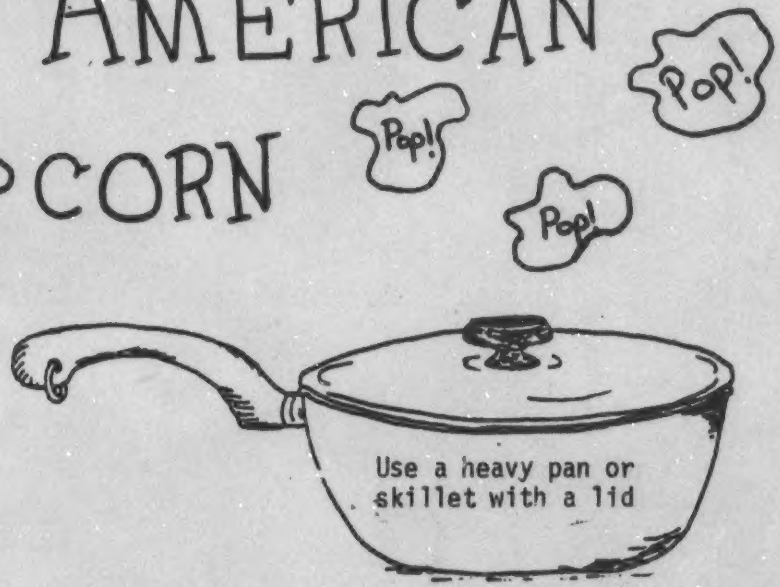
8. Clean up



Student activity sheet

Thank the American Indians for this treat. Popcorn which contains about 13.5% moisture will pop when it is heated to about 400°F or 205°C.

ALL AMERICAN POPCORN



Use a heavy pan or skillet with a lid

1. Pour in 25 ml of oil.
2. Place the pan on medium-high heat. Drop in two kernels of popcorn. Heat until one of the kernels pops, about 3 or 4 minutes.
3. After the kernel pops, add 100 ml of fresh popcorn and put on the lid.
4. Put an oven mitt on each hand. Shake frequently. Do not peek!
5. Remove from the heat when sounds of popping have stopped.
6. Pour the popcorn into a bowl.
7. If your class is making popcorn bowls, measure and save 1 L of your popcorn.
8. Lightly salt the rest of the popcorn. Divide and try it out.

Double Peanut Popcorn Balls
(Classroom Recipe - 40 medium balls)

6 L popped corn
300 g roasted peanuts
375 ml sugar
375 ml light corn syrup
375 ml chunky peanut butter
10 ml vanilla

1. Measure popped corn and peanuts in large, buttered container ready for making balls.

2. Combine sugar and corn syrup in saucepan. Cook over medium heat, stirring constantly with a wooden spoon, just until mixture comes to a full rolling boil.

3. Remove from heat and stir in peanut butter and vanilla.

4. Immediately pour over popcorn and peanuts; mix well.

5. With wet hands, form mixture into balls.

NOTE: Scoop a pile of mixture about the size for each onto wax paper for each student to pick up after wetting hands.

Dear Parent:

In class, we worked with popcorn as combined social studies, science, math, and language arts activity.

It was fun and a good learning experience!

You can help your child remember the importance of the activity by asking questions such as: *What was your favorite part of the activity? What did you learn about popcorn?*

You and your child may enjoy using our popcorn ball recipe to make treats for your family. This recipe contains high-protein peanuts and peanut butter. Working together with your child can be a fun and learning time at home.

Thank you for your interest.

Double Peanut Popcorn Balls

(Makes 10 large or 20 small balls)

2 qts. popped corn (2 L)
1 cup roasted peanuts (150 g)
1/2 cup sugar (125 ml)
1/2 cup chunky peanut butter (125 ml)
1/2 tsp. vanilla (5 ml)
1/2 cup corn syrup (125 ml)

1. Mix popcorn and peanuts in a large, buttered bowl.

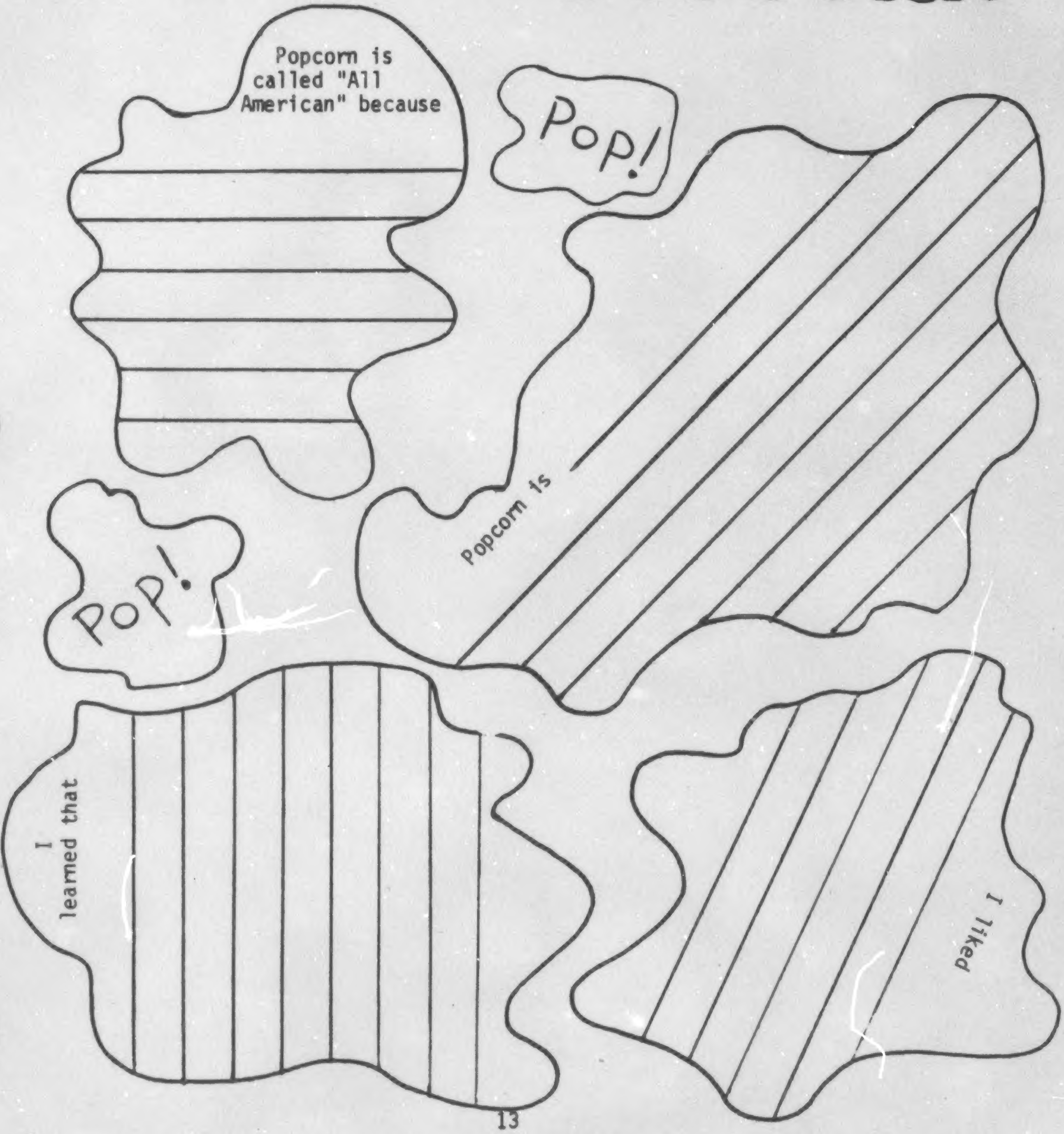
2. Combine sugar and corn syrup in a small saucepan. Cook over medium heat, stirring constantly just until mixture comes to a full, rolling boil.

3. Remove from heat. Stir in peanut butter and vanilla.

4. Immediately pour over popcorn; mix well.

5. With wet hands, form into balls.

ALL-AMERICAN POPCORN



Popcorn is called "All American" because

Popcorn is

I learned that

I liked

RESOURCE SHEET

FOR THE TEACHER:

Association for Childhood Education International. *Cooking and Eating With Children*. Washington, D.C.: Association for Childhood Education International, 1974. (3615 Wisconsin Ave., N.W.)

Burnett, Millie. *Dance Down The Rain, Sing Up The Corn*. San Francisco: Rand & Research Associates, Inc., 1975. (4843 Mission St.)
To use in the study of American Indians.

Cobb, Vickie. "Popcorn: Measuring Water in Seeds" *Science Experiments You Can Eat*. New York: J.B. Lippincott, 1972.
Experiments that can be conducted by intermediate students.

Dawson, Paul Dow. "Perfect Popcorn, Inc.," *Instructor*. January, 1977.
A description of a fourth and fifth grade classroom corporation.

Long, Betty and Carol Witte. *Metric Fun Cooking Cards*. Manhattan Beach, CA: Teachers, 1975.

Walker, Alan B. "What Puts The Pop In Popcorn?" *Teacher*. December, 1976.
A science experiment related to moisture in seeds.

Wayman, Joe and Lorraine Plumb. *Secrets and Surprises*. Carthage, IL: Good Apple, 1975. (Box 299)
This contains activities with popcorn for language arts and self-concept experiences.

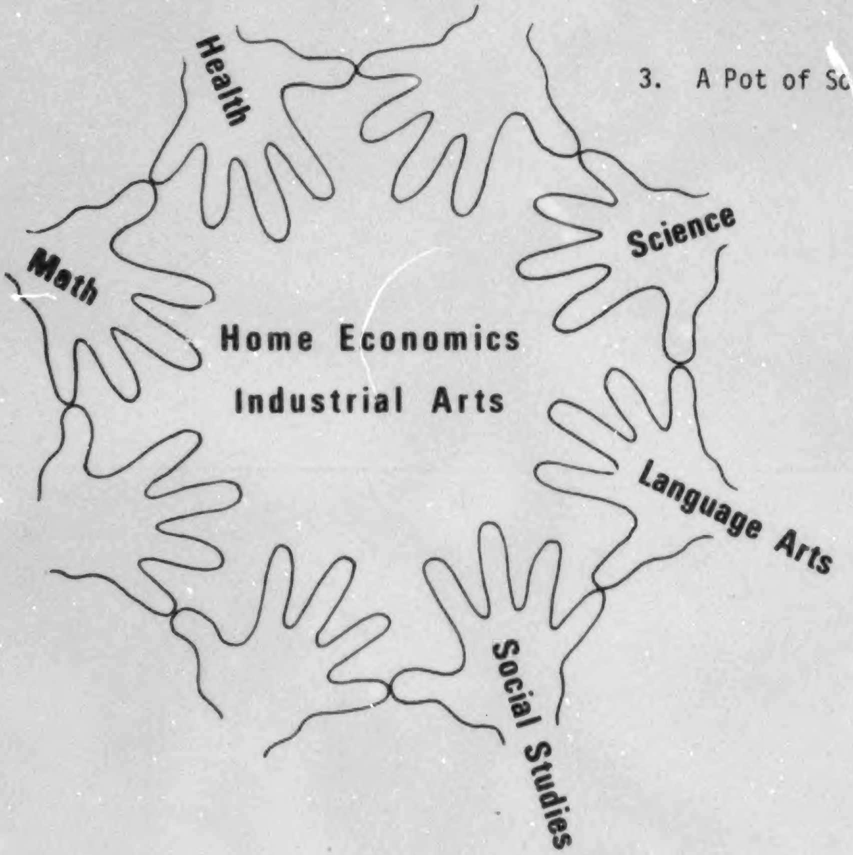
Williamson, Victoria. *Classroom Cookery Primary Level*. Monterey Park, CA: Sunshine Learning Aids, 1975. (P.O. Box 2003)

FOR THE STUDENT:

Krantz, Hazel. *100 Pounds of Popcorn*. New York: Scholastic Book Services, 1961.
A fiction book about a youth popcorn business. It would be a good introduction for study in economics.

Politi, Leo. *Three Stalks of Corn*. New York: Charles Scribner's Sons, 1976.
A story of a Mexican family and the importance of corn in their culture.

Wilson, Pauline. *Cricket's Cookery*. New York, NY: Random House, 1977.
Includes a fun song to use with activity that has common tune.


Health
Science
Math
Home Economics
Industrial Arts
Language Arts
Social Studies

3. A Pot of Soup or Chowder

Hands-on Approach

wichita public schools
wichita, kansas

Activity Based Curriculum for Elementary Education

ACTIVITY BASED CURRICULUM FOR ELEMENTARY EDUCATION

ACTIVITY TITLE:

A Pot of Soup or Chowder

AREA TITLES AND MAJOR CONCEPTS:

Health
- Basic Four Food Groups - vegetables
- Safety practices in the kitchen

Language Arts
- Vocabulary
- Reading skills

Math
- Metric volume measurement

Science
- Sensory development
- Changes in food caused by heat

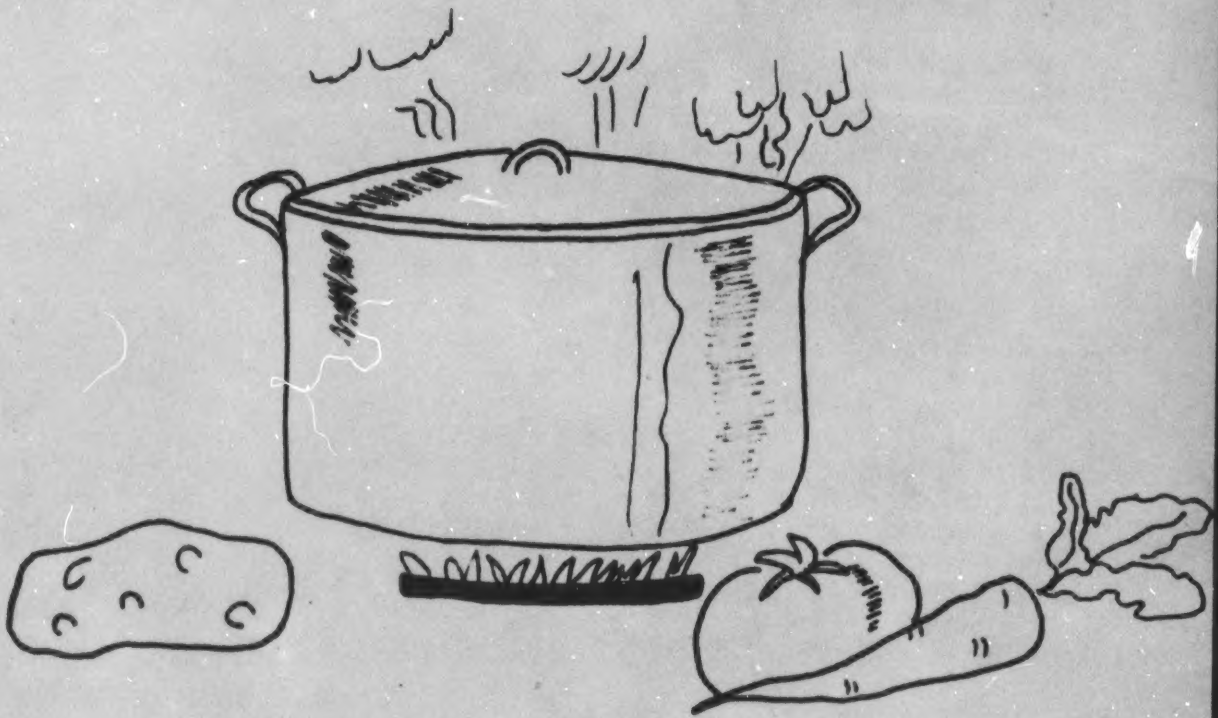
Social Studies
- Regional studies - geography
- Working together - sharing
- History

DESCRIPTION OF ACTIVITY AND ENRICHMENT:

The class will work together to make one big pot of soup. Each small group will be assigned a responsibility to contribute in the making of the soup.

RELATED CAREERS:

Waitress, Dietician, Soup Factory Worker, Writer, Cook, Historian.



SUPPLIES:

Grocery items
Styrofoam cups or hot cups
Oyster crackers - 1 sack
Napkins or paper towels

SUGGESTED VEGETABLES FOR FRIENDSHIP GARDEN SOUP:
5 small potatoes; celery; 3 small carrots; 1 onion; sprig of parsley; ripe tomato or 1 lb. can of tomato juice; fresh green beans or frozen green beans; 1 green pepper.
Also needed - 6 bouillon cubes, salt and pepper, and 100 ml macaconi or 50 ml rice.

Clam Chowder ingredients on page 8

Jotting Space

EQUIPMENT:

Hot plate
Large pot with lid - 10 quart or larger
Vegetable peelers
Paring knives
Chopping boards
Teaspoons
Wooden spoon
Ladle
Oven mitts
Hot mat for pan
Blender (opt.)
Liter measure
Measuring spoons
Timer (opt.)
Skillet and meat fork, if bacon used
Metric measuring cup

CLEAN UP CENTER:

Dish soap
Dish pans (2)
Liquid bleach
Tea towels
Drainer and tray
Disposable dishcloth
Plastic trash sack
Recycled plastic jug
Container for washing vegetables

ACTIVITY PROCEDURES:

1. Introduce the vegetable soup activity and relate to current classroom theme. Examples:
   a. Read Stone Soup by Marcia Brown.
   b. Read stories of the original Thanksgiving, and refer to it as the first "potluck" supper with everyone contributing what was available.
   c. Take a trip to a vegetable garden or supermarket to name and observe vegetables.

2. Discuss and role-play safety rules for cooking (page 5).

3. Prepare to make vegetable soup.
   a. Set up a cooking center in the classroom.
   b. Assign one vegetable to an individual student to prepare. Select a group that will be the "cook."
   c. Write recipe on the poster for cooking center (page 7).
   d. Discuss the recipe, directions, and terms in preparation for cooking.

4. Prepare and serve the Friendship Garden Soup. During the preparation and serving, students should be given the opportunity to describe the things they see, smell, feel, and hear.

5. Send home Parent Letter (page 9).

6. Compare a variety of vegetables together in a tasty soup to a variety of people working together as a group. *In what ways are they alike?*

ALTERNATE ACTIVITY PROCEDURES:

1. Read a story about a sailor or with a setting on the eastern coast where chowder is a familiar word. Ideally, the story makes a reference to chowder.

2. Ask: *How many of you have tasted chowder?* Discuss the term briefly.

3. Make plans to prepare a pot of clam chowder in class.
   a. Set up a cooking center or work stations.
   b. Copy recipe for students to read in advance of activity (page 8).
   c. Discuss safety rules in cooking.
   d. Assign cooking jobs, dividing students into work groups.

4. Prepare and serve one classroom recipe of clam chowcer. Use recipe on page 8. During preparation and serving, students should be given the opportunity to describe the things they see, smell, feel, etc. The word *aroma* could be used very well in this activity.

5. If the introductory story described the chowder, relate back and compare to room experiences.

6. Send home Parent Letter (page 9).

7. Explore clams as animals, seashells, ocean life, and other sea stories.

FOLLOW UP IDEAS:

Discover how vegetables grow and the parts of a plant. On a classroom chart, title five columns with parts of the plant that we eat. Have students cut out vegetable pictures to classify and glue in appropriate column. Note the colors of the vegetables. It might look like this:

Root	Stem	Leaves	Flowers & Fruit	Seeds
Radish	Celery	Lettuce	Cauliflower	Peas
Beet	Rhubarb	Spinach	Broccoli	Corn
Carrots	Asparagus	Cabbage	Eggplant	Beans
Potatoes	Mushrooms	Kale	Peppers	
Turnips		Parsley	Tomatoes	
Onions		Collards	Squash	
		Brussel Sprouts	Okra	
			Cucumber	

During the remainder of the year, encourage children to bring vegetables to class that may be new to some of the other class members. These may be ones they see in the produce department or use at home.

Use potatoes to experiment with the difference in texture, taste, and appearance of vegetables when cooked and when raw. Verbally describe these changes. Other science principles can be explored with a potato, such as test for starch. Starch is made by plants as a way of storing sugar. If starch is present in a food, iodine changes from reddish-brown to a blue-black. *Don't eat any food on which you put iodine! Iodine is poisonous.* Heat breaks the walls of the starch cells which softens the vegetables and makes the starch more useable by the body.

Play a guessing game to name vegetables. Put several vegetables in a bag. Close the bag, leaving enough room for a hand to slip in. Have a child reach in, pick a vegetable, name it, and pull it out to see if the name is correct.

Let each student plant some seeds in a paper cup or milk carton. Make a calendar sheet. Cut out 10-14 small brown pots. Each day a brown pot is pasted on the day while waiting for seeds to sprout. When the first green shoot appears, paste on a green leaf. Vegetables grow very s-l-o-w-l-y.

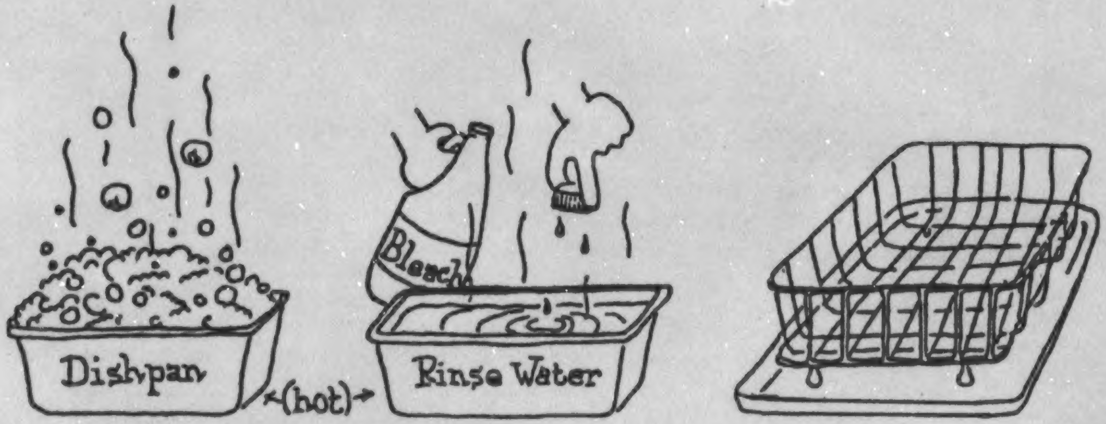
Have "The Eating of the Greens" on St. Patrick's Day. Arrange green vegetables, such as lettuce, cabbage, raw spinach, green pepper, celery, parsley, and dill pickles for a "green" buffet. Serve green punch.

EVALUATION:

Have students complete sentences on Evaluation Sheet (page 10). Discuss sentences for increased awareness and knowledge. There should be no right or wrong answers.

HEALTH AND SAFETY PROCEDURES:

1. Wash hands before handling food.
2. Make sure that all work surfaces are clean.
3. Use wooden spoons in cooking to prevent the spoon from getting hot.
4. Use dry pot holders or oven mitts to handle pans and lids when cooking.
5. Turn handles of pans on the hot plate so they will not be knocked off.
6. Be careful not to touch the sides of the hot plate; it will get hot.
7. Be sure to turn off and unplug appliances when finished.
8. Do not hand electrical appliances with wet hands.
9. Have only a small group of students at the hot place at any one time.
10. Wipe up spills immediately to prevent falls.
11. Caution students about hitting the soup pan and skillet. The soup and bacon grease would cause serious burns.
12. Paring knives and vegetable peelers are sharp! Supervise their use carefully. Do not lay knife down in dishwater or rinse water. Use a chopping board.
13. Clean Up Station



Cut disposable dishcloths in half.

Have tea towels available for drying the dishes when air drying in the drainer is not possible.

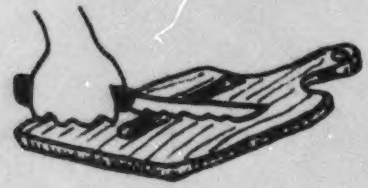
Add one capful of liquid bleach to the rinse water for sterilization of the dishes.

Clean up is part of the activity and should be planned with the class.

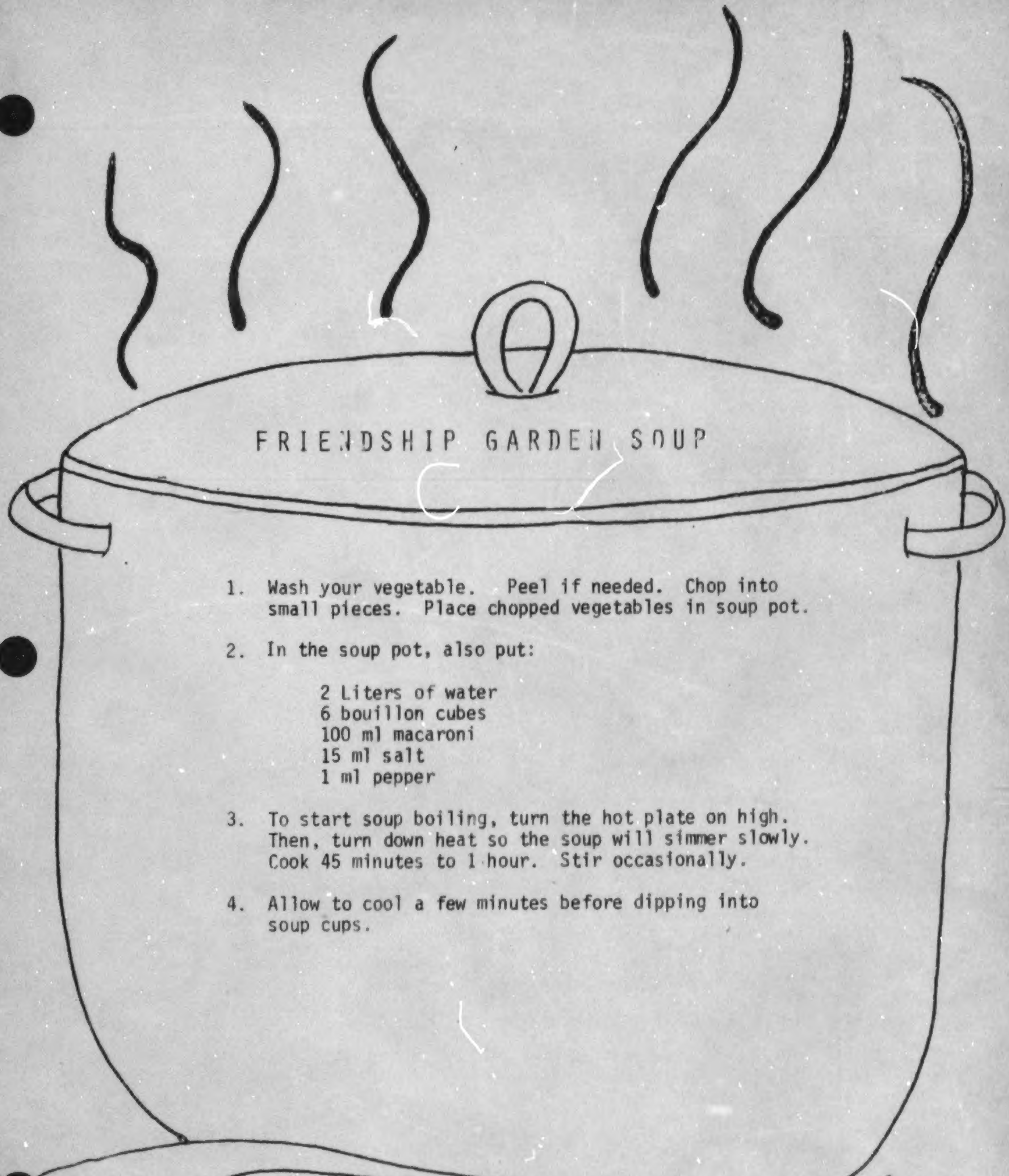
Carry clean, warm water in recycled plastic jugs to the clean-up station.

TIPS TO THE TEACHER:

1. Ask parent volunteers to work in the room during the activity. The children should have close supervision in using paring knives, peelers, and the hot plate. Instruct parents to watch safety habits and explain procedures in making the soup--not to do the work for the children.
2. Have the children to estimate how many grams are in a medium potato. Record estimates and weigh the potato.



3. Demonstrate to the class how to use a vegetable peeler, cutting away from yourself. Also show them how to cut and chop vegetables on a cutting board. Instruct them not to cut the vegetables while holding "up in the air."
4. Children could bring vegetables for the soup. Allow enough time for mothers to fit this in a weekly shopping trip. The vegetables in the soup could be kept several days before making the soup.
5. Explain why all vegetables should be washed.
6. Soups are easy to cook in the classroom because time and exact measurements are not critical. Use very small portions in serving, and let them have seconds as long as it lasts.
7. These soups could also be made in a large crock pot. The vegetables must be cooked a longer period of time, but do not have to be watched or stirred.
8. The students not having a vegetable to prepare for the soup could be the cooks. They would measure and add other ingredients in Step #2 of the recipe, start the soup cooking, stir occasionally, and time the cooking.
9. Students could rotate in one classroom center to prepare the vegetables. If this set-up is used, have the group assigned to potatoes in the center just before the cooks to prevent the potatoes from turning dark.
10. In vegetable soup, 5 ml of basil flakes could be added with seasonings.
11. Have each student weigh in grams the vegetable they are using and record the weight on a chart.
12. The macaroni can be replaced with 50 ml rice in the vegetable soup.
13. Use beverage hot cups to serve the soup.



FRIENDSHIP GARDEN SOUP

1. Wash your vegetable. Peel if needed. Chop into small pieces. Place chopped vegetables in soup pot.

2. In the soup pot, also put:

   2 Liters of water
   6 bouillon cubes
   100 ml macaroni
   15 ml salt
   1 ml pepper

3. To start soup boiling, turn the hot plate on high. Then, turn down heat so the soup will simmer slowly. Cook 45 minutes to 1 hour. Stir occasionally.

4. Allow to cool a few minutes before dipping into soup cups.

ALTERNATE ACTIVITY:

CLAM CHOWDER

1 can of clams (minced)	4 strips of bacon
1 large onion	1 L milk
2 or 3 stalks of celery	50 g margarine - 1/2 stick
700 ml water	7 ml salt
5 small potatoes	1 ml pepper

1. Peel potatoes and chop fine on chopping board. Put in soup pot. Clean up your area.

2. Wash celery. Peel onion. Cut celery and onion into big chunks. Put in blender container. Add 700 ml water. Put lid on blender. Push "chop" button and off several times. Pour all of celery, onion, and water into soup pot. Wash blender.

3. Fry bacon in a skillet at low heat until crisp. Drain and crumble bacon into small pieces. Pour bacon grease into hot cup and let cool. Wash skillet and clean up area.

4. Cook vegetables 15 minutes. Turn heat on high to start cooking. After it comes to a boil, turn down heat to medium and simmer. Cover pan with lid. Stir occasionally.

   Open the can of clams. Measure salt and pepper into a small cup. Add ingredients to pan when vegetables are finished cooking; bring to a hard boil.

   Just before serving, add bacon, margarine, and milk to the chowder. Heat just until milk is steaming and margarine is melted.

5. Dip into soup cups.

****

NEEDED AT STATIONS:

#1 - Potatoes, peelers, paring knives, chopping boards, paper towels, trash with plastic bag liner.

#2 - Blender, celery, onion, water, L measure, dish pan to wash celery, knife, vegetable brush.

#3 - Bacon, hot plate, skillet, paper towel, paper plate, meat fork.

#4 - Hot plate, large soup pan and lid, wooden spoon, hot mitts, timer, can opener, clams, salt, pepper, measuring spoons (5 ml and 1 ml), paper cup, milk, Liter pitcher, margarine, table knife.

#5 - Hot cups, hot pad for pan, ladle, teaspoons, crackers and bowl, napkins.

NOTE: Stations #3 and #4 could be side by side, so that the hot plate could be used as both stations list a hot plate.

Dear Parent:

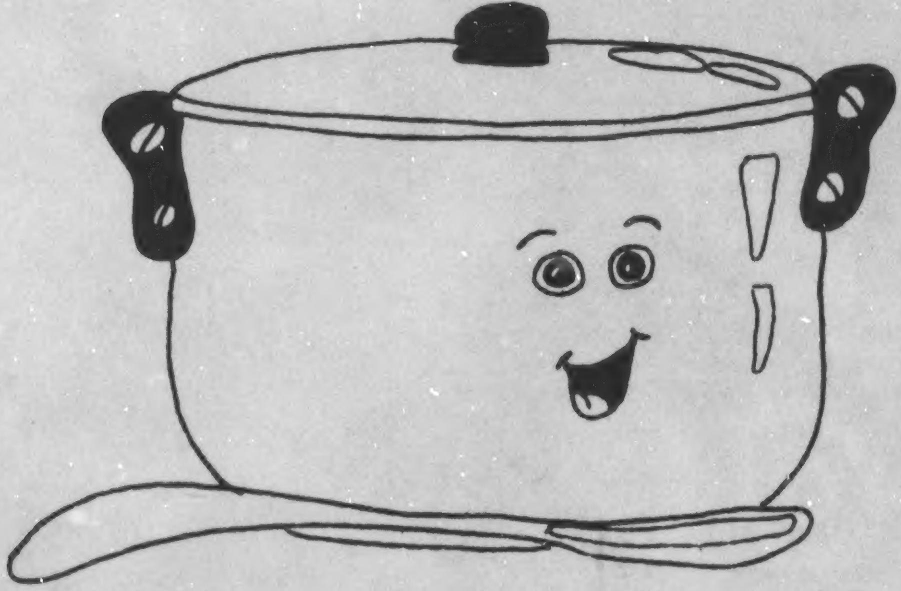
As an activity for health, language arts, science, and social studies, our class worked together to make a large pot of soup. It was fun and very tasty.

Your child will enjoy telling you about our classroom experiences.

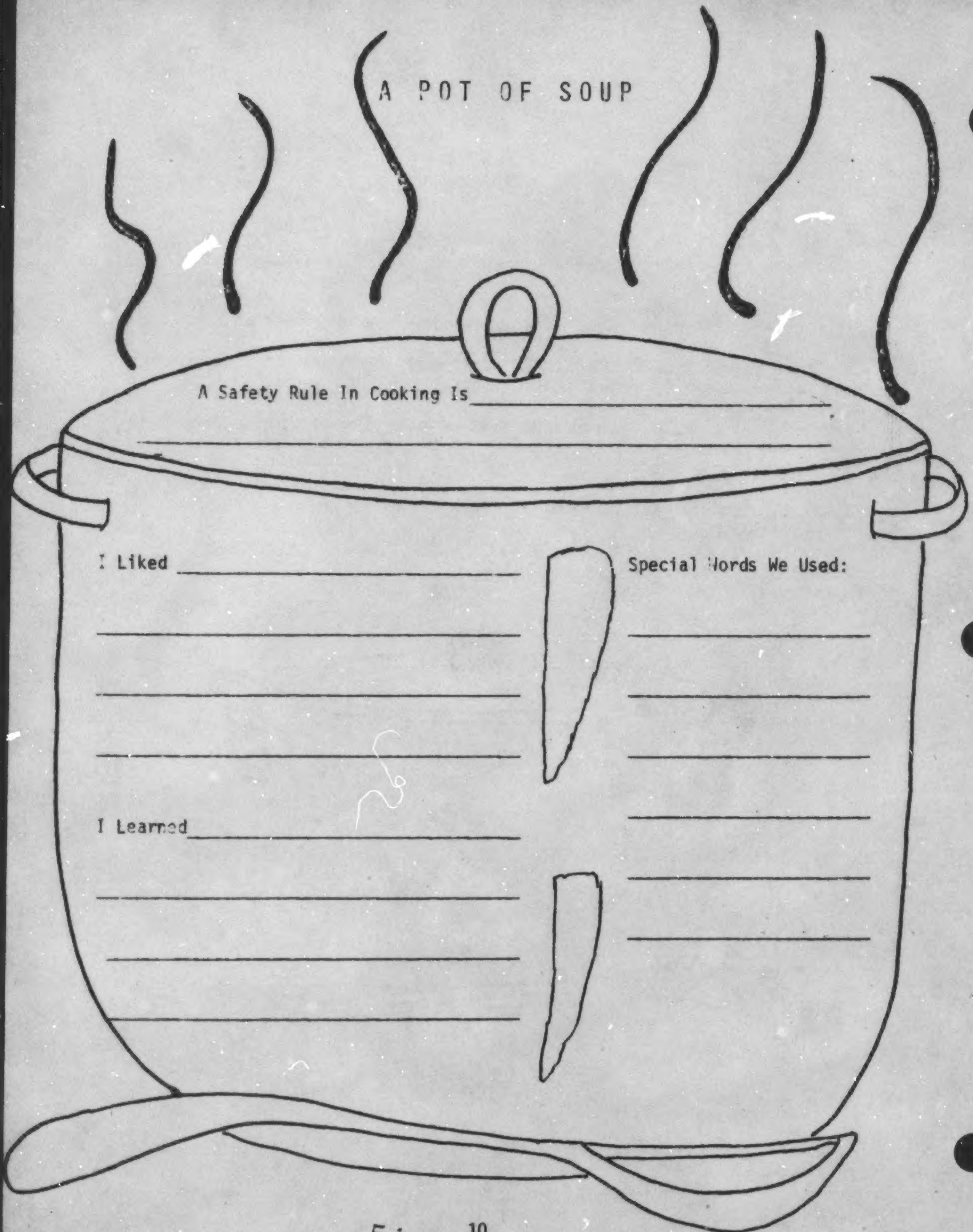
Our soup was very nutritious. New words were learned and new foods explored. Reading skills were practiced in following the recipe.

Reading skills could be practiced and new words learned at home when your child and you make a simple recipe or another project together. Learning results from doing!

Thank you for your interest in our classroom work.



A POT OF SOUP



A Safety Rule In Cooking Is ______________________________

____

I Liked ______________________________

____

____

____

I Learned ______________________________

____

____

____

Special Words We Used:

____

____

____

____

____

____

RESOURCE SHEET

FOR THE TEACHER:

Anderson, Eleanor. "Sharing Soup." Instructor. November, 1977, p. 166.

Association for Childhood Education International. Cooking & Eating With Children. Washington, DC: Association for Childhood Education International, 1974.

Greene, Ellin. Clever Cooks. New York: Lothrop, Lee & Shepard Co., 1973. A concoction of stories, charms, recipes and riddles. Includes a story to read to the class related to the activity.

Goodwin, Mary T. and Gerry Pollen. Creative Food Experiences For Children. Washington, DC: Center for Science in the Public Interest, 1975.

McClenahan, Pat and Ida Jaqua. Cool Cooking for Kids. Belmont, CA: Fearon Publishers, Inc., 1976.

Williamson, Victoria. Classroom Cookery (Primary Level). Monterey Park, CA: Sunshine Learning Aids, 1975. (P.O. Box 2003)

FOR THE STUDENT:

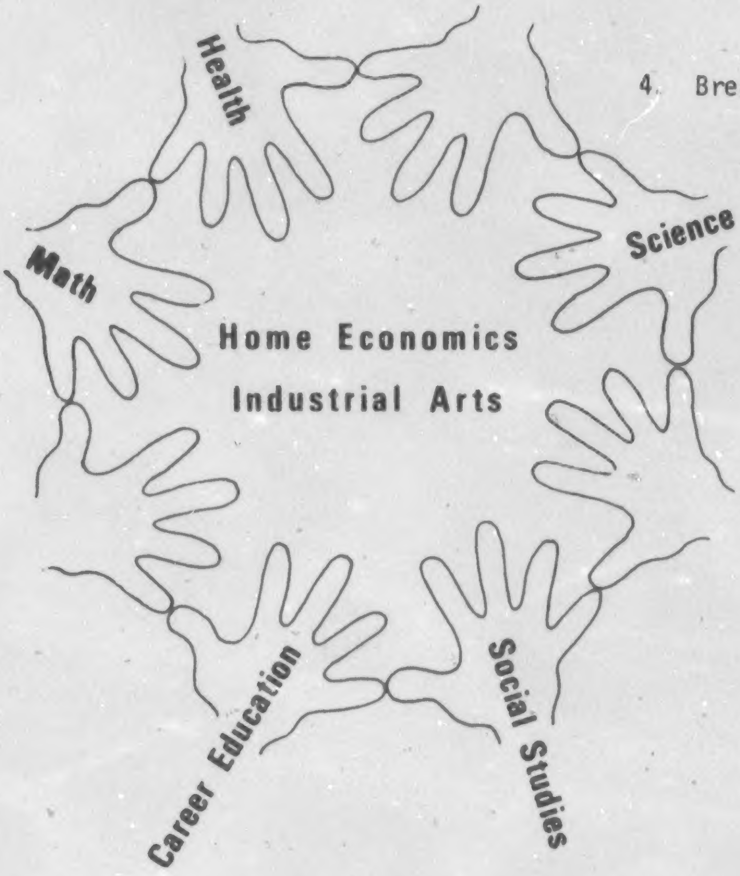
Brown, Marcia. Stone Soup. New York: Charles Scribner & Sons, 1947.

James, Evelyn. New Funtrition Coloring Tear Sheets. Denver, CO: American School Food Service Association, 1974. (4104 East Iliff). Nutrition coloring sheets and simple crossword puzzles can be reproduced from this booklet. Several are on vegetables and soup.

Miverick, Else Holmelund. Little Bear, Birthday Soup. New York: Harper & Row Publishers, 1961.

Wilson, Pauline. Cricket's Cookery. New York, NY: Random House, 1977. Includes a fun song to use with activity that has common tune.

4. Bread and Butter


Health
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Home Economics
Industrial Arts
Career Education
Social Studies

Hands-on Approach

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wichita, kansas

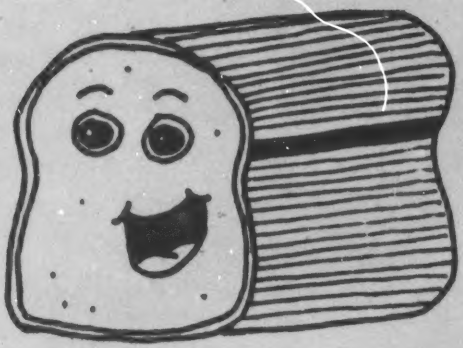
Activity Based Curriculum for Elementary Education

ACTIVITY BASED CURRICULUM FOR ELEMENTARY EDUCATION

ACTIVITY TITLE:

Bread and Butter

AREA TITLES AND MAJOR CONCEPTS:



Health
  Bread group - important nutrients
              - B vitamins and iron
  Butter - an extra in Basic Four

Math
  Metric volume measurement
  Dividing portions

Science
  Observing changes caused by heat and motion
  Yeast plant - growth and behavior
  Origin of food
  Sensory development

Social Studies
  Food industries
  Economics
  Community workers

DESCRIPTION OF ACTIVITY AND ENRICHMENT:

One group recipe of yeast bread will be baked in the classroom, using a blender for mixing. Students will become aware of the ingredients in bread and observe the results of the yeast and heat. Butter will be made for the bread by students taking turns shaking a jar of cream.

RELATED CAREERS:

Farmer, Dairy Producer, Dietitian, Chemist, Truck Driver, Baker, Food Processing Technician, Grocer.

SUPPLIES

Dried milk powder - 125 ml
Salad oil - 75 ml
Sugar - 75 ml
Salt - 5 ml, plus some for butter
Eggs - 2
Dry yeast - 1 pkg
Flour - 850 ml
Cream - whipping - 475 ml (2 small cartons)
Shortening or oil for cans
2 coffee cans or other small cans with plastic lids
Napkins
Marble

Jotting Space

EQUIPMENT

Blender
Rubber scraper
Large mixing bowl
Metric measuring cup
Liter measure
Wooden spoon
Plastic wrap
Measuring spoon - 5 ml
Oven
Oven mitts
Timer or clock
Slicing knife
Cutting board
Table knives
Jar - tight fitting lid to make butter
Jar for buttermilk

CLEAN UP CENTER

Plastic dishpans, dish drainer, and tray
Tea towels
Dish soap
Liquid bleach
Disposable dish cloth (cut in 1/4's)
Paper towels for hands

ACTIVITY PROCEDURES:

1. Select and conduct related introductory studies appropriate for class level. Take a field trip to a bakery, dairy farm, etc. and/or show related films.

2. Set up a work table for making bread. It should be close to an outlet for the blender, but in an area where all the students can sit and see. Equipment and supplies needed are listed on page 2.

3. With student helpers, measure, mix, and start the first rising of the bread. Use recipe sheet on page 8. At various times during the rising, allow individuals or small groups to "visit" the dough to observe what is happening.

4. Select an appropriate time during the day to make the butter. Passing the jar is easier if the children can sit in a circle. While others are waiting their turn, have the children:

   a. *Guess what we are making from the cream.*
   b. *Listen to the sound of the marble.* As the cream thickens into butter, it will become increasingly muffled.
   c. *How much butter will this amount of cream make?* Record each guess.
   d. *Watch the color.* It will change from white to yellow.
   e. *What other objects change from a liquid to a solid?*
   f. *Guess what the thin liquid is called after the butter is made.*

5. With student helpers, stir down the dough and divide between the cans. Allow about 1 hour for the second rising. Bake the bread in the classroom for additional observation benefits and tantalizing aroma.

6. After slicing the bread, have each child spread some homemade butter on their piece. Ask for descriptive words about their bread and butter.

7. Send home Parent Letter (page 9) to explain the activity and enrichment.

That's a good one..
write it down!

FOLLOW UP IDEAS

Take a field trip to a bakery and/or dairy.

In a reading center, display related story books. Examples are on the Resource Sheet under FOR THE STUDENT, page (10).

For a tasting experience, buy or make a variety of ethical and regional breads such as: tortillas, French bread, Johnny cakes, pumperknickel, bread sticks, and Indian fry bread.

To illustrate that yeast is a plant that grows, dissolve a package of yeast in a cup of warm water. Divide the yeast solution into three juice glasses. Put 1/4 tsp. sugar in the first glass; use 1/4 tsp. salt plus 1/4 tsp. sugar in the second glass. Leave the third glass untreated. Stir each glass with a different spoon. Set the three glasses in a cake pan of warm water. Watch for fermentation activity. Which glass has the most activity? Which glass has the least? Have students observe, touch, smell, and taste the dissolved yeast. Discuss that all plants need food and water to grow. The sugar is the food while salt will slow the growth.

Use a globe or map to find the states located in the wheat belt.

Explore how early man ground his wheat and other grain with rocks. Grind wheat by hand, using stones. Use some of the ground wheat in the bread made in class.

Using a blender to crack some wheat kernels, have students identify the three parts; bran--the outer covering, germ or heart and large food storage area, called the gluten or endosperm. Materials are available from Wheat Flour Institute, Room 1010, 14 East Jackson Blvd., Chicago, IL 60604 and Kansas Wheat Commission, 1021 North Main, Hutchinson, KS 67501. The germ has the most food value; the bran has the second largest amount. White flour is made from the endosperm and enriched to put in some of the vitamins and minerals that are in the bran and germ. The white flour will not have the fiber that is in whole wheat flour.

As yeast grows, it produces carbon dioxide, a gas that takes up space. To illustrate this principle, put a mixture of yeast, sugar, and water in a pop bottle. Stretch the neck of a balloon over its mouth. After a few minutes, the balloon will begin to inflate, filling with carbon dioxide. If the experiment is continued, it may force the balloon off the top of the bottle. Put the balloon back on the bottle to show that later, when the yeast dies, no more gas is produced; visable evidence being that the balloon deflates.

Use dried heads of wheat still on the stem to make a decorative fall arrangement in the classroom.

Explore other products made from wheat in addition to flour such as cereals, spaghetti, macaroni, noodles, and wheat paste. Make a picture collage of things made from wheat and wheat flour.

FOLLOW UP IDEAS - Continued

Bread painting provides an art experience that can be eaten. Use a plain loaf of white bread with at least one slice for each child. Mix 75 ml of milk with a few drops of food coloring. Clean water color brushes very well. In a learning center, each child "paints" a picture on their slice of bread. As soon as the painting is finished, toast lightly. The toasting process will intensify the paint. Now enjoy the treat.

EVALUATION

Have the students, orally or in writing, finish statements to indicate increased knowledge and awareness.

Bread is important because:

Flour is made from:

Butter comes from:

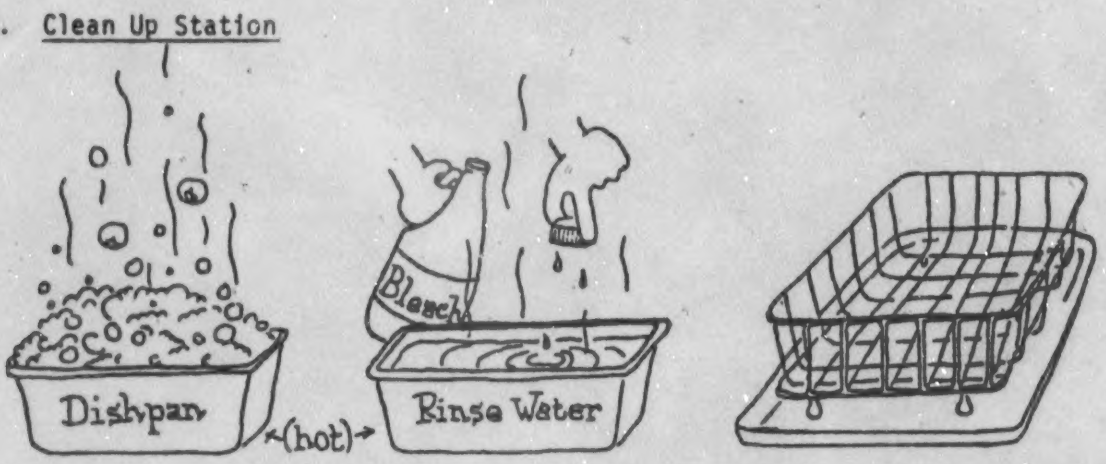
To make bread, I would use:

Our bread in class was:

The part I liked best was:

HEALTH AND SAFETY PROCEDURES

1. Wash hands before handling food.
2. Make sure that all work surfaces are clean.
3. Use wooden spoons in cooking and mixing.
4. Use dry pot holders when pans are too hot to touch.
5. Blender blades are very sharp. Handle as a knife in washing.
6. Be careful not to touch the sides of the broiler-oven; it will get hot.
7. Be sure to turn off and unplug appliances when finished.
8. Do not handle electrical appliances with wet hands.
9. Have only small groups of students watching or using the oven or hot plate at one time to prevent accidents.
10. Wipe up spills immediately to prevent falls.
11. Clean Up Station



Cut disposable dish cloths.

Have tea towels available for drying the dishes when air drying in the drainer is not possible.

Add one capful of liquid bleach to the rinse water for sterilization of the dishes.

Clean up is part of the activity and should be planned with the class.

Carry clean, warm water in recycled plastic jugs to the clean-up station.

TIPS TO THE TEACHER

1. In this activity, use student help as much as possible. They can measure ingredients, stir, grease cans, wash equipment, etc.

2. Be sure the top inside edges of the coffee can is smooth where the lid has been cut off.

3. If some wheat kernels are ground in class with clean stones, use these as part of the flour in the classroom recipe of bread.

4. The temperature should be reduced 25°F if the bread is baked in a portable turbo oven.

5. Preheat the oven only 5 minutes before putting in the bread to conserve energy.

6. If the plastic wrap does not cling to the bowl during rising time, a rubber band can be used to hold it close to the bowl. The plastic wrap and plastic lids on cans allow students to observe the rising process.

7. The colored coffee can will absorb more heat and result in a browner crust inside the pan than a shiny can that will reflect the heat.

8. Allow at least 4 hours for making bread. Much of the time is rising and baking. The actual mixing time is short.

9. In the winter, set dough to rise in a warm location. Ideal temperature for yeast to grow is 80 to 85°F (30°C).

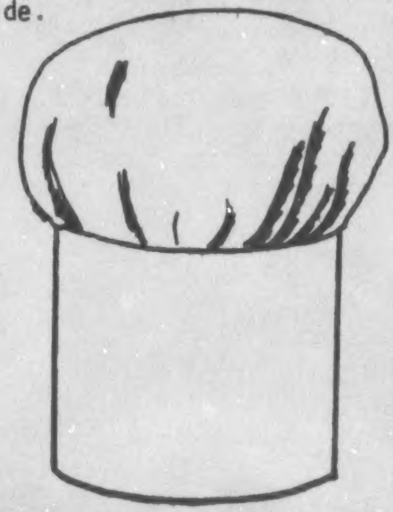
10. The blender for mixing can be related to the large mixers at the bakery.

11. Make baker hats to wear the day of bread baking.

    a. Cut a rectangle from heavy white paper; large enough to wrap around to a child's head.
    b. Roll the paper into a cylinder so it fits over the head. Tape or staple in place.
    c. Cut a very large circle of white crepe paper.
    d. Squeeze glue around the inside top edge of the cylinder.
    e. Place the edge of the crepe paper circle into the glue. Gather the edge of the circle in small folds as you work around the opening. This can be done best with the cylinder on its side.

12. Give each student a small taste of the buttermilk in a paper cup for an added experience.

13. The bread recipe in this activity provides approximately 25 thin slices.



RECIPE SHEET

Blender Pop Up Bread

This bread is not kneaded. It is cooked in recycled cans that have a plastic lid to cover while rising.

1. Measure 850 ml flour into a large bowl.
2. In blender container, combine remaining ingredients in order listed. Blend 1 or 2 minutes.

    5 ml salt
    125 ml dried milk powder
    75 ml sugar
    250 ml hot tap water (40°C)
    75 ml salad oil
    2 eggs
    1 package dry yeast

3. Pour blended ingredients into flour and stir.
4. Cover with plastic wrap and let rise 1 1/2 hours.

5. Grease 2 one-pound coffee cans or 4 peanut cans and the plastic lids. Stir down dough and divide between cans. Put lids on and allow to rise until lids pop off cans.
6. Bake on lower rack at 350°F (175°C) for 35 minutes for coffee can size. Allow to cool in cans 15 minutes.
7. Slice on chopping board and serve warm with butter.

NOTE: Whole wheat flour may be substituted for one-half of the all-purpose flour.

Marble Butter

Take the cream from the refrigerator and let it come to room temperature

Pour 2 small cartons (475 ml) whipping cream into a jar that can be tightly sealed. Put a clean marble in the jar. Everyone should have a turn shaking the jar. It takes about 10 minutes to become butter. Drain off the excess liquid; the buttermilk. Add salt.

Dear Parent:

As an activity for health, math, science, and social studies, our class made yeast bread and butter.

The Bread and Cereal Group of the Basic Four Foods is important because these foods supply B Vitamins and Iron.

We also learned that the yeast is a plant. Your child can tell you more about our experiences.

Below is the bread recipe used in our class. If you try this recipe, please ask your child to help. It will be a learning, sharing, and fun time for your child.

Blender Pop Up Bread

This bread is not kneaded. It is cooked in recycled cans that have a plastic lid used to cover the dough while rising.

1. Measure 850 ml (3½ cup) flour into a large bowl.

2. In a blender container, combine remaining ingredients in order listed. Blend 1 or 2 minutes.

    5 ml salt (1 tsp.)
    125 ml dried milk powder (½ cup)
    75 ml sugar (¼ cup)
    250 ml hot tap water (1 cup)
    75 ml salad oil (¼ cup)
    2 eggs
    1 package dry yeast

3. Pour blended ingredients into flour and stir.

4. Cover with plastic wrap and let rise 1½ hours.

5. Grease 2 one-pound coffee cans or 4 peanut cans and the plastic lids. Stir down dough and divide between cans. Put lids on and allow to rise until lids pop off cans.

6. Bake on lower rack at 350°F (175°C) for 35 minutes for coffee can size. Allow to cool in cans 15 minutes.

7. Slice on chopping board and serve warm with butter.

NOTE: Whole wheat flour may be substituted for one-half of the all-purpose flour.

RESOURCE SHEET

FOR THE TEACHER

Goodwin, Mary T. and Gerry Pollen. Creative Food Experiences For Children. Washington, D.C.: Center For Science In The Public Interest, 1974. (1779 Church Street)

Kernel of Wheat. Poster. Hutchinson, KS.: Kansas Wheat Commission. (1021 North Main St.).

Let's Make Butter. Rosemont, IL.: National Dairy Council. (6300 North River Road).

McAfee, Oralie and others. Cooking and Eating With Children, A Way To Learn. Washington, D.C.: Association For Childhood Education Inter., 1974. (3615 Wisconsin Ave. N.W.)

Pearce, Emma Rose and Norma Jean Polley. "A Bread and Butter Lesson," Teacher. December, 1975, pp 54-56.

FOR THE STUDENT

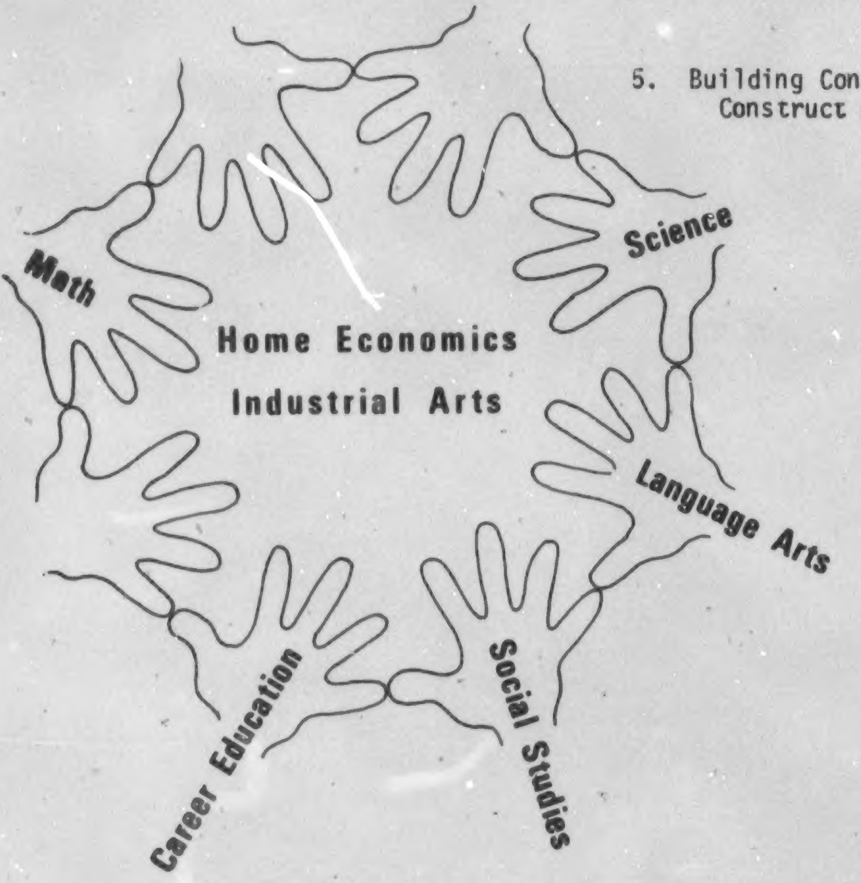
Green, Carla. I Want To Be A Farmer; I Want To Be A Baker; and I Want To Be A Dairy Farmer. Chicago: Children's Press.

Hoban, Russell. Bread and Jam For Frances. New York: Harper and Row, 1964.

Stevens, Carla. How To Make Possum's Honey Bread, Skunk's Chocolate Sprinkle Bread, and Raccoon's Raisin Bread, Too. New York: Scholastic Book Services, 1975.
A story book about animals making yeast bread. The recipes and directions are easy to follow.

Uncle Jim's Dairy Farm. Rosemont, IL: National Dairy Council. (6300 North River Road).

5. Building Contractors
Construct A Wren House

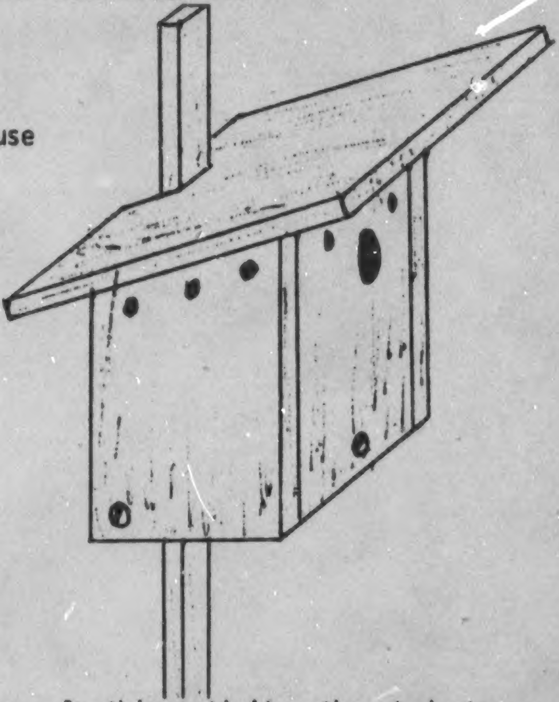

Math
Science
Home Economics
Industrial Arts
Language Arts
Social Studies
Career Education

Hands-on Approach

wichita public schools
wichita, kansas

Activity Based Curriculum for Elementary Education

ACTIVITY BASED CURRICULUM FOR ELEMENTARY EDUCATION



ACTIVITY TITLE:

Building Contractors Construct A Wren House

AREA TITLES AND MAJOR CONCEPTS:

Language Arts
  Reading and following directions
  Research on birds - using the library

Math
  Metric linear measurement
  Geometry - shapes

Science
  Bird Studies

Social Studies
  Careers in construction

DESCRIPTION OF ACTIVITY AND ENRICHMENT:

Each student will make a wooden wren house. In this activity, the students will measure in centimeters, saw, drill, hammer, and screw. Bird habits, needs, and habitat will be explored in class.

RELATED CAREERS:

Wildlife Specialist, Park Manager, Carpenter, Artist, Conservationist

REQUIRED FOR THIS ACTIVITY:

The wood must be precut in 4 widths for this activity. Each birdhouse requires boards that are 18 cm wide for the roof; 14 cm wide for back and front; 10 cm wide for sides and bottom; and a piece 3 cm wide for the hanging bracket.

SUPPLIES:

Softwood - 2 cm thick (such as fencing cedar)
  Per house:
  18 cm width - 18 cm length
  14 cm width - 35 cm length
  10 cm width - 50 cm length
  3 cm width - 60 cm length
Pencils
Nails - 30 per house
Screws - 3 per house
White glue

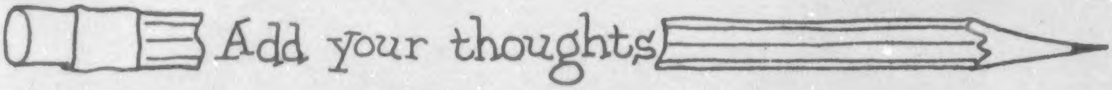
Jotting Space

EQUIPMENT:

Centimeter rulers
Try-squares
Miter boxes and/or sawing jig
C-clamps
Wooden clamps
Crosscut saws
Brace and auger bit (1")
Hand or electric drill
Screwdriver
Block plane
Hammers
Templates for screw holes and front hole for young children
Bits the diameter of screws
Vises
Back saw
Chisel
Meter stick

ACTIVITY PROCEDURES:

1. Conduct bird studies.
2. Introduce the birdhouse activity. Tell the class that they will each become a building contractor. Hand out Memo to Birdhouse Contractors (page 8) for a reading assignment. Have students add other tips for birdhouses as they research birds.
3. Send home Parent Letter for permission to work with tools (page 7).
4. Demonstrate measuring in centimeters and using a try-square. Hand out page 1 of Student Activity Sheet (page 9). The whole class completes measuring in steps #1 to #3 at the same time. Set up miter boxes in a sawing center to be used as time permits.
5. Hand out page 2 of Student Activity Sheet (page 10). Have students read the steps. (See Tip #6 (page 5) for alternate to each student having page 2.) Set up Work Stations. Demonstrate special tools and procedures used.
6. Start a few students at a time at step #4. Students construct the birdhouse following steps #4 to #14.
7. Discuss how to hang the birdhouse and good locations. Have each student check locations at home and make some written plans for their birdhouse.
8. After taking the birdhouse home and "renting" it out, have students to start bird watching. Have students record observations at several bird-watching sessions. At various times during the remainder of the year, allow time for bird-watching reports.



FOLLOW UP IDEAS:

During the winter, save nest building scraps of yarn, string, cotton, rag strips, feathers, etc. Cut the yarn and string in 15 to 20 cm pieces to avoid birds from becoming tangled. Help the birds at nest building time, in late winter or early spring, by putting the scraps in a recycled mesh (large weave) produce bag. Hang in a tree where birds can come and select materials. Observe the number and kinds of birds that visit the nest supermarket. What do they take? Later in the year, see if you can identify any of the materials in area nests.

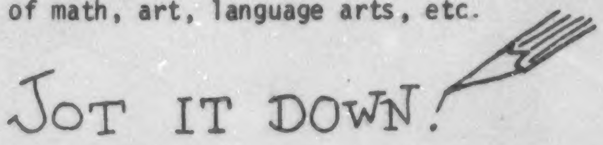
Continue measuring in centimeters, using objects in the room.

Make a classroom list of what to look for while bird watching.

Find pictures of other styles of birdhouses. Display pictures on a bulletin board. Do they meet the specifications on the "Memo" (page 8)?

Conduct a telephone survey to locate places that sell birdhouses. What is the retail price of a wren house? What did a birdhouse cost that was made in class?

Explore the knowledge and skills needed by a building contractor. Visit a building site to observe the use of math, art, language arts, etc.



EVALUATION:

Have students complete sentences on Evaluation Sheet (page 12). This should indicate increased awareness and knowledge.

cm, mm, m!
Go Metric

HEALTH AND SAFETY PROCEDURES:

1. Keep nails out of your mouth.
2. Swinging a hammer carelessly could hurt someone close by.
3. Always wear safety glasses when using tools.
4. Keep nails picked up off the floor.
5. Beware of saw teeth. They are sharp. Keep hands off cutting edges. If younger children are sawing, keep both hands on the saw handle. Clamp the piece of wood to be cut in the miter box.
6. Tools are not toys. Tools are safe when handled correctly but are dangerous when handled carelessly.
7. Be sure every student has permission from home to work with tools.
8. Demonstrate to the class safety procedures in using the drill and a plane.

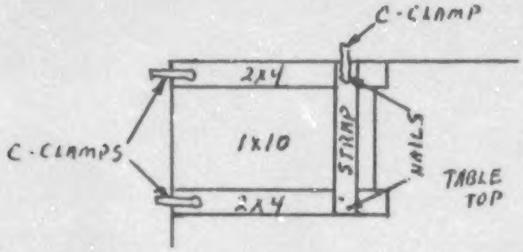
TIPS TO THE TEACHER:

1. If fencing cedar is used, have the student to do measuring, marking, and writing on smooth side. The rough side should be placed to the outside when putting the house together.
2. Have two students work together as partners helping each other in measuring, sawing, drilling, and hammering.
3. Ask parent volunteers to help in the classroom during the activity. Instruct the volunteers to give directions and encouragement, enforce safety rules, and help the child that is having difficulty without doing the work for them.
4. Be sure a scrap of wood is between side pieces and table top when drilling holes for screws.
5. If younger children are making the house, make templates to mark hole location in steps #4, #5, and #8. Intermediate age students would gain measuring experience in doing their own marking.
6. An alternate method to giving each student page 2 of Student Activity Sheet is to use each step and illustration on a separate Work Station sign.
7. Rough cedar, fencing scraps can often be obtained from a fencing project. Fencing is purchased in 8 foot lengths and most fences are 6 foot high.
8. Tell the students to use a sharp pencil in marking the boards for fine lines.

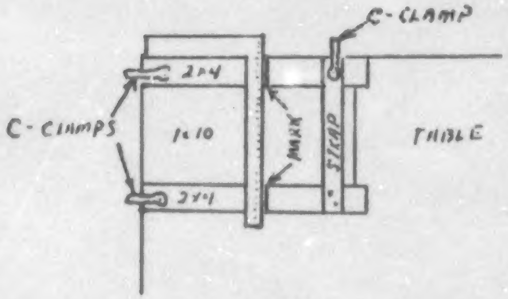
TIPS TO THE TEACHER Continued

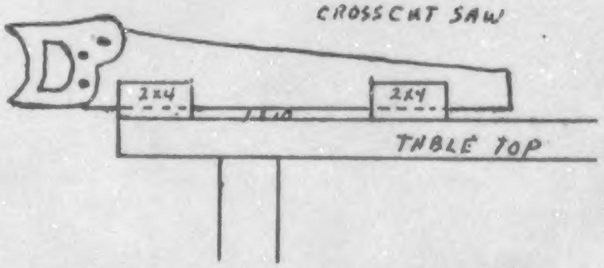
Make sawing jigs for boards too wide for miter box.

a. Toward the edge of the table clamp two 2 x 4 boards on each side of a 1 x 10 board. Nail a wooded strap across the loose ends of the 2 x 4 boards. Clamp the strap to the edge of the table.

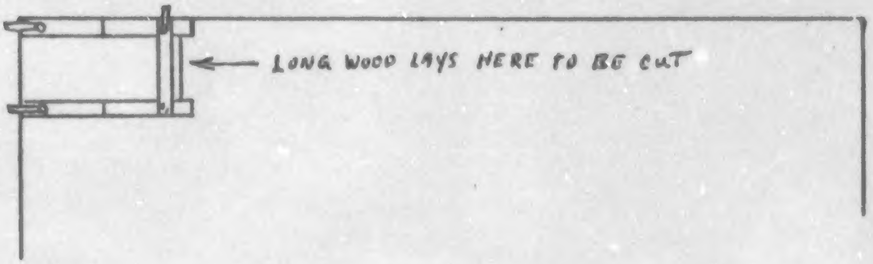

C-CLAMP
2x4
C-CLAMPS
1x10
STRAP
NAILS
TABLE TOP
2x4

b. Lay a framing square across both 2 x 4 boards and mark. Select a cross cut saw and cut both 2 x 4 boards, on the lines at the same time, Miter-box style. Stop sawing when saw scratches the 1 x 10 board. KEEP SAW FLAT.


C-CLAMP
2x4
C-CLAMPS
1x10
MARK
STRAP
TABLE
2x4


CROSSCUT SAW
2x4
2x4
1x10
TABLE TOP

c. To cut boards slip a long piece of wood in back of jig until cut line is directly under saw blade. Keep saw flat while sawing.


LONG WOOD LAYS HERE TO BE CUT

ACTIVITY BASED CURRICULUM FOR ELEMENTARY EDUCATION

Dear Parent:

As part of our ABC/EE program your child will have the opportunity to participate in hands-on projects in Language Arts, Math, Social Studies, and Science. Your child may be working with basic hand tools, small electrical appliances and tools, wood burners, carving tools, and/or sewing machines.

We will demonstrate equipment and take all precautions for their safety. You may also help by talking with your child about safety in use of tools.

In order for us to have an awareness that you do have a knowledge of your child's activities, we must have your consent before allowing your child to use any equipment.

The attached permission slip must be signed in order for your child to participate in our activities.

You are welcome to visit our classroom at any time during ABC/EE activities. Please feel free to ask any questions concerning this program.

- -

I give my permission for ______________________________ to use the equipment and tools in the classroom ABC/EE activities.

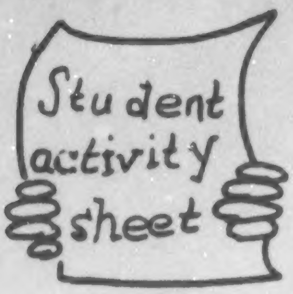
____
(Parent or Guardian)

____
(Date)

MEMO

TO: All Birdhouse Building Contractors
FROM: Your Bird Friends
SUBJECT: Building Specifications

1. Use wood for birdhouses. *Metal becomes too hot.*
2. Drill "window" holes at the top on the sides for air and small holes in the bottom for drainage.
3. Make the right size "front door." Different birds need different size holes. *Wrens need a 2.5 cm hole.*
4. The hole should be high, so mother bird can not be seen when sitting on the nest.
5. Don't make a front porch. *A perch is a landing place for unwelcomed birds.*
6. Fasten the house on a post or tree out in the open, about 2 to 5 meters above the ground. *Cats can sneak up in a dense area.*
7. Make a single-family house. *Most birds like privacy, except for purple martins.*
8. Clean house in the fall. Cover the entrance hole after cleaning until you see one of the birds in the spring. *The bird family will make a new nest next year.*
9. Don't hang the house from the end of a branch. *Birds don't like swinging houses.*
10. If painted, make it a nature color. *Birds don't want their house in bright colors. It would draw attention to their nesting spot.*
11. Protect the house from intruders by putting a metal guard around the trunk or post about 1.4 meters high.

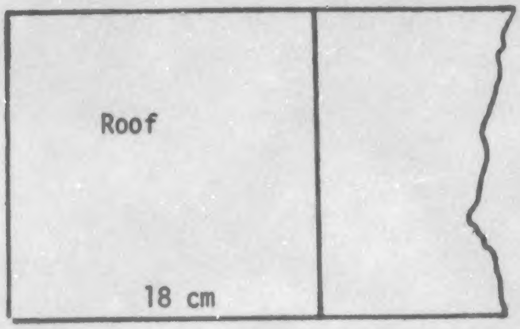

Student
activity
sheet

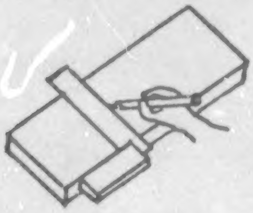
A WREN HOUSE

1. Take a 18 cm wide board. Make a mark 18 cm from the left end to make a square.

   Use a sharp pencil

   Make a straight line across the board.

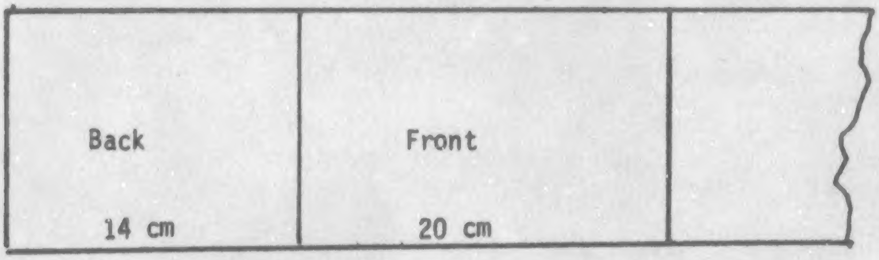




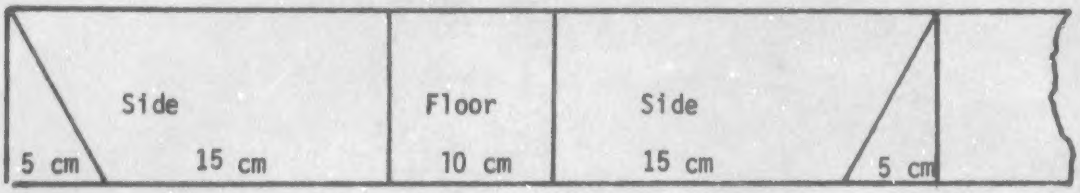
Using a try-square

Write the name of the part, number of centimeters and your name on the board.

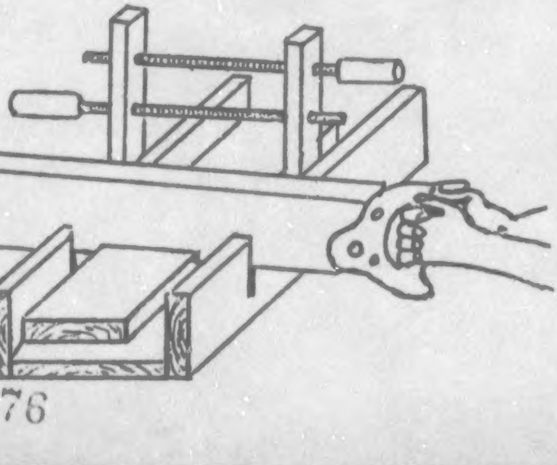
2. Next, use a 14 cm wide board. Mark lines at 14 cm and at 20 cm.


Back
14 cm
Front
20 cm

3. Now, use a 10 cm wide board. Mark your board like the one below.

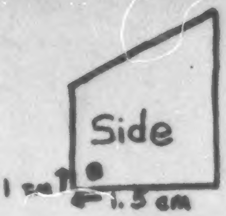

Side
5 cm
15 cm
Floor
10 cm
Side
15 cm
5 cm

Saw your boards in a miter box.
Be sure to saw on the line you marked.
Place both hands on the saw handle while sawing.

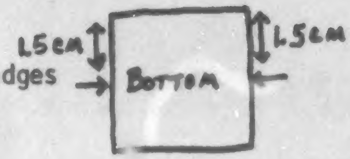


STUDENT ACTIVITY SHEET - Continued

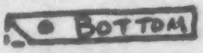
4. Mark for screw holes on sides. Drill holes.



5. Mark and drill 2 pilot holes in side edges of bottom.



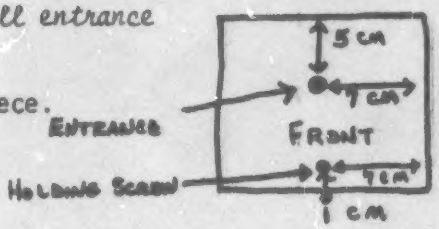
6. Bevel back bottom edge of bottom with a plane or file.



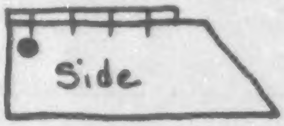
7. Screw sides to bottom.

8. Measure and drill a 2.5 cm entrance hole. *Drill entrance hole with brace and auger bit.*

Mark and drill, holding screw hole on front piece.



9. Glue and nail back onto sides.



NOTE: Do not nail or glue back or front to bottom. It is hinged with the screws.

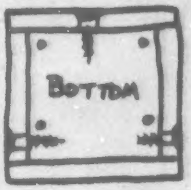
10. Use front hold screw hole to mark pilot hole on bottom piece. Drill pilot hole. Screw front onto bottom.

11. Place roof on house so there is 1 cm overhang in back and mark placement. Glue and nail on roof. *The grain on roof piece must be crosswise to the back.*

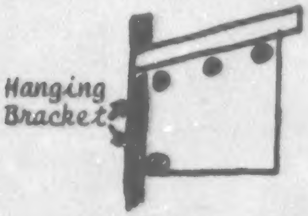
12. Mark and saw a narrow board 60 cm long for a hanging bracket.

13. Use bracket board to mark width of notch in back center of roof. Cut out notch in roof. Glue and nail bracket onto back of birdhouse.

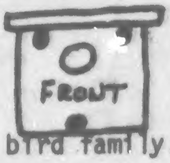
14. Drill vent holes.



a. Four vents in bottom corners.



b. Three vents in each side.



c. Two vents at top of front.

15. Take the birdhouse home and rent it to a nice bird family.

I plan to put my birdhouse ____

____

Dear Parent:

As an activity in science, math, and language arts, our class made birdhouses. It was a lot of fun and a real learning experience. All of the parts in the birdhouse were measured in centimeters. In science, we have been studying birds--their habits and needs. Reading was an important part in finding information on birds and following directions for the house.

Your child will enjoy telling you about their birdhouse building contractor job and how their house was made.

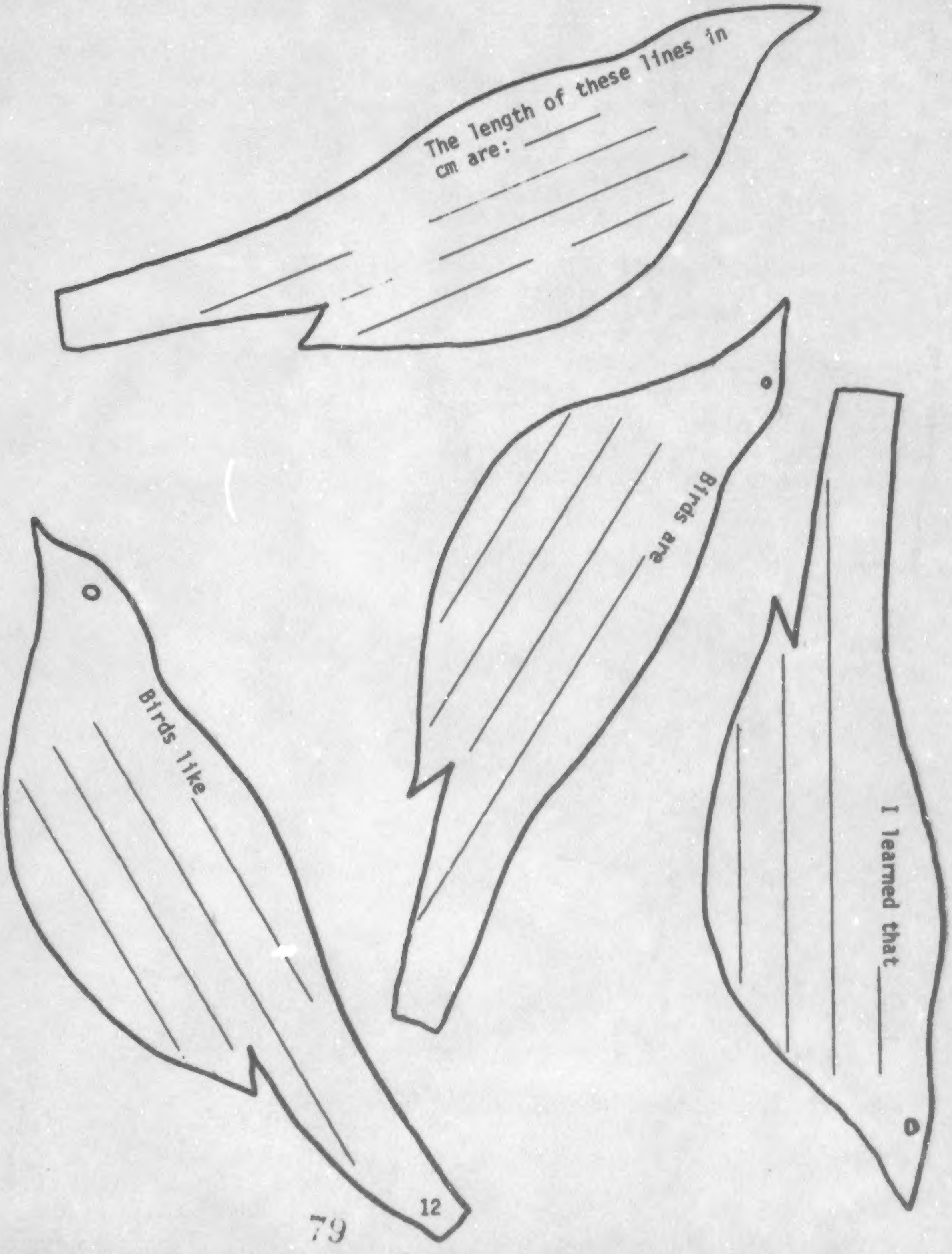
Your family should discuss the best location for the house. In our reading, we found that an open tree or pole is better than a real dense area where cats can sneak up on the birds.

After the house is fastened up and ready for rent, the bird watching can start. Each one in class is asked to record some of their observations, such as kind of birds they see, color marking on the birds, and repeated actions.

Also, any other information on birds from magazines, newspapers, or books would add to our classroom learnings.

Thank you for your interest in our classroom activities.

BIRDHOUSE BUILDING CONTRACTOR CHECK-UP



The length of these lines in cm are: ______

Birds are ______

Birds like ______

I learned that ______

RESOURCE SHEET

FOR THE TEACHER:

Elementary Education Committee Of The Wildlife Society. Ways of Wildlife. Edited by Eleanor Horwitz. Englewood Cliffs, NJ: Clifton Press, 1977. (904 Sylvan Avenue)

Hallamore, Elisabeth. The Metric Book...Of Amusing Things To Do. Woodbury, NY: Barron's Educational Services, Inc., 1974. (113 Crossways Park Drive)

National Audubon Society. New York, NY. (950 Third Avenue) Information about birds and how and where they live.

National Wildlife Federation. Wildlife Week Ideas for Teachers. Washington, DC: National Wildlife Federation. (1412 Sixteenth St.)
Excellent free materials published each spring.

Skelsey, Alice and Gloria Huckaby. Growing Up Green. New York: Workman Publishing Company, 1973.

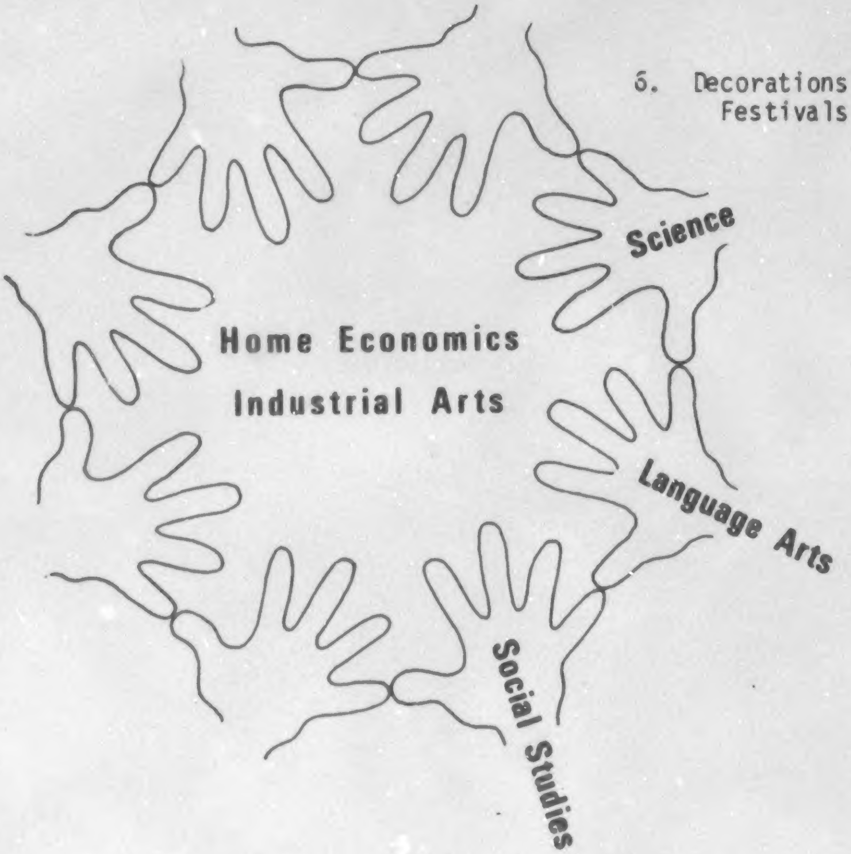
FOR THE STUDENT:

Allen, Gertrude E. Everyday Birds. Boston, MA: Houghton Mifflin Co., 1971.

Hines, Bob and Peter A. Anastasi. Fifty Birds of Town and City. Washington, DC: U.S. Department of the Interior, Fish and Wildlife Service, U.S. Government Printing Office.

Leverich, Kathleen. Cricket's Expeditions. New York, NY: Random House, 1977.

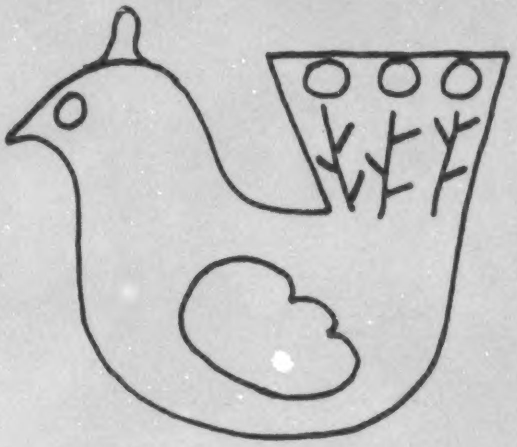
6. Decorations for Winter Festivals


Science
Home Economics
Industrial Arts
Language Arts
Social Studies

Hands-on Approach

wichita public schools
wichita, kansas

Activity Based Curriculum for Elementary Education



ACTIVITY TITLE:

Decorations for Winter Festivals

AREA TITLES AND MAJOR CONCEPTS:

Language Arts
  Oral language development

Science
  Properties of objects with texture

Social Studies
  Families are unique and special

DESCRIPTION OF ACTIVITY AND ENRICHMENT:

Each student will sort a variety of decorative objects by the texture. Properties used to sort the trims will be identified in advance and used in labeling sorting bins. These trims will be used to decorate festival shapes cut from felt. The shapes will be related to different family traditions or customs.

RELATED CAREERS:

Fabric Store Clerk, Factory Worker, Sheep Farmer, Family Counselor, Craft Shop Owner

SUPPLIES

Felt, various colors
Pattern shapes (page 8 to 11) - See TIPS TO TEACHERS, number 3
White glue
Cotton balls (about 10 per student or polyester fill)
Hairpins - 1 per shape
Scrap trims such as:
  lace, beads, ribbon, yarn, small flat buttons, sequins, fringe
Masking tape
Pencils
Sorting bins or buckets

EQUIPMENT

Fabric scissors
Dressmaker pencils or narrow chalk

ACTIVITY PROCEDURES

1. Have students tell about winter festivals they celebrate at home, such as Hanakkah, Christmas, Chinese New Year, or special winter activities. Tell your students about your traditions. Let them know that each family's traditions are unique and important.

2. Send home Parent Letter (page 5) to ask for decorative trims and explaining the activity.

3. With the class, prepare sorting containers. Label them with properties of texture. These will be used for sorting trims by students as they bring them to class.

4. Prepare the class for activity. Discuss safety. (page 4)

5. Set up a classroom learning center for construction of decorations. Make center poster (pages 6 and 7). Make an example to illustrate putting on the hanger.

6. Day 1 - Each student selects one pattern he/she wishes to use. At the center, they trace it twice on 2 felt squares to make two identical shapes. These are cut out with fabric scissors or other sharp scissors.

   Glue the cut pieces together, using a fine line of white glue on the outer edges of one piece. Leave the top area without glue to insert stuffing. Let dry.

7. Day 2 - Each student bends the ends of a hairpin, then tapes it at the top inside of the felt shape for a hanger. Stuff lightly with cotton balls or polyester-fill. Glue opening closed.

   Each student decorates their stuffed shape as desired by cutting and gluing trims from the sorting containers. Have the students tell about the textures they feel while working in this center.

8. After the shapes are dry, display them in the classroom. Have class-sharing time on textures used, raw materials involved, and family use of winter-time decorations.

PLEASE RECORD ALL BRAINSTORMS.

FOLLOW UP IDEAS

During the year, have the children collect and sort many other items. These can be collected in the classroom, on nature walks, or at home. The students could help choose the criteria for sorting such as:

Shiny and Dull
Large and Small
Rough and Smooth
Soft and Hard
Heavy and Light
Bend easily and Won't Bend easily
Dissolve and Won't Dissolve

An item that will allow young children a variety of choices for sorting is a collection of plastic caps that come from milk jugs, soap bottles, etc. They come in many colors, textures, and sizes. Other items they could sort are leaves, spools, nuts and bolts, keys, buttons, old pencils, rocks, etc.

Have the children taste bits of popcorn, lemon, pickle, candy, grapefruit, red hots, peanuts, coconut, pretzels, and clove gum. Describe each taste verbally as sweet, sour, spicy, or salty.

Compare sand with other soils by looking, feeling, and weighing when dry, damp, and wet. Compare dry and wet sand by making castles, pies, and heaps.

Make a class list of new words. Review and add more words after each sorting experience.

As materials are used in normal course of classroom activity, distinguish between construction materials such as wood, plastic, glass, cotton, paper, etc.

Have a parent tell the class about their family traditions.

Tell the class about an African winter festival. *'Kwanzaa'* means *'first fruits'* and is the name for a week long celebration at the end of the year. Family members exchange gifts each day and have a feast on the last day. Seven candles are placed in a candleholder and one lit each day. Make a bread dough clay candleholder for seven candles for the classroom. Celebrate the feast day with sections of fresh fruit.

EVALUATION

To evaluate the children on the ability to sort objects by properties, use the Texture Tree Worksheet (page 12). With the trims left from making the felt decorations, the students cut and glue samples under the appropriate words on the work sheet. Change words to correspond with your class activity.

HEALTH AND SAFETY PROCEDURES

1. Scissors should be carried with the points down. Fabric scissors are very sharp.
2. Buttons or other trims should not be placed in the mouth.
3. Keep materials such as beads and buttons picked up off the floor to prevent falls.

TIPS TO THE TEACHER

1. Before gluing, you may wish to protect table with newspaper or brown wrapping paper.
2. In sorting objects, a heading "Undecided Objects" may be helpful for odd items.
3. Have patterns cut in advance, ready for students to trace around on the felt. Sawed pressed wood or 1/8" plastic would provide the students with another material for texture, as well as be permanent patterns.
4. Provide extra trims for students to sort who forget or are unable to bring any from home.
5. Gallon plastic milk jugs could be cut and labeled to make sorting bins with handles. Buckets also make good sorting containers.
6. By using felt, right and wrong side of fabric will not have to be taken into consideration. Felt has more body than many knits, also it doesn't stretch in tracing the pattern as much as knits.
7. Select a limited number of textures to use on sorting bins.
   Example:
   - soft and hard
   - smooth and rough
8. Ask for parent volunteers to work in the classroom during the activity as aids.
9. On dark, colored felt, dressmaker pencils, narrow-tip markers, or narrow chalk could be used for tracing.
10. Have students write their names on a piece of paper and pin to their shape after each day's work in the center.

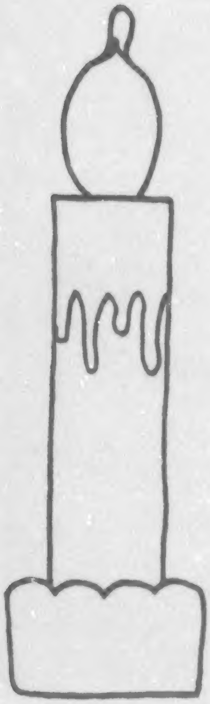
Dear Parent:

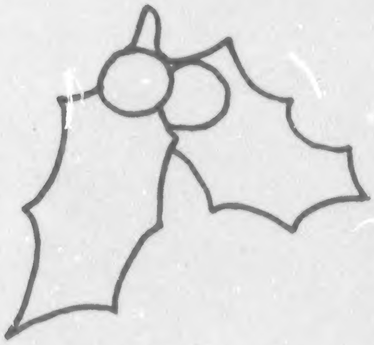
As a science, social studies, and language arts activity, we are collecting scraps of decorative trims to sort according to the way they feel. Later, the trims will be used to decorate winter-time shapes.

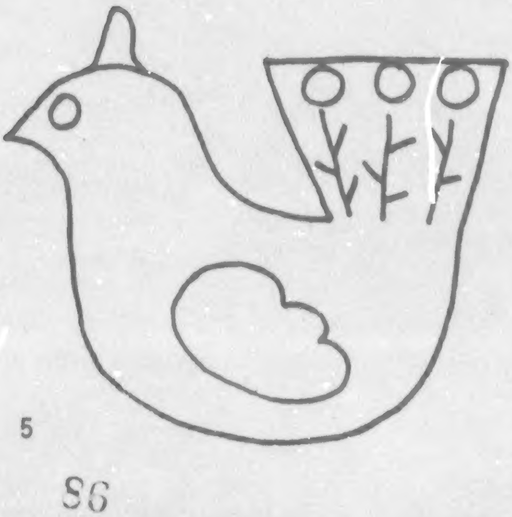
Also in class, we have been talking about winter festivals. Families are important. Children are becoming more aware of the differences in families. Telling your child about the customs that make your family special can be an important part of your family celebrations.

Do you have any of the following items you could share with us? We need bits of lace, yarn, ribbon, old beads, sequins, and small flat buttons. Perhaps you have other trims we could use. Please send them with your child within the next week.

Thank you.





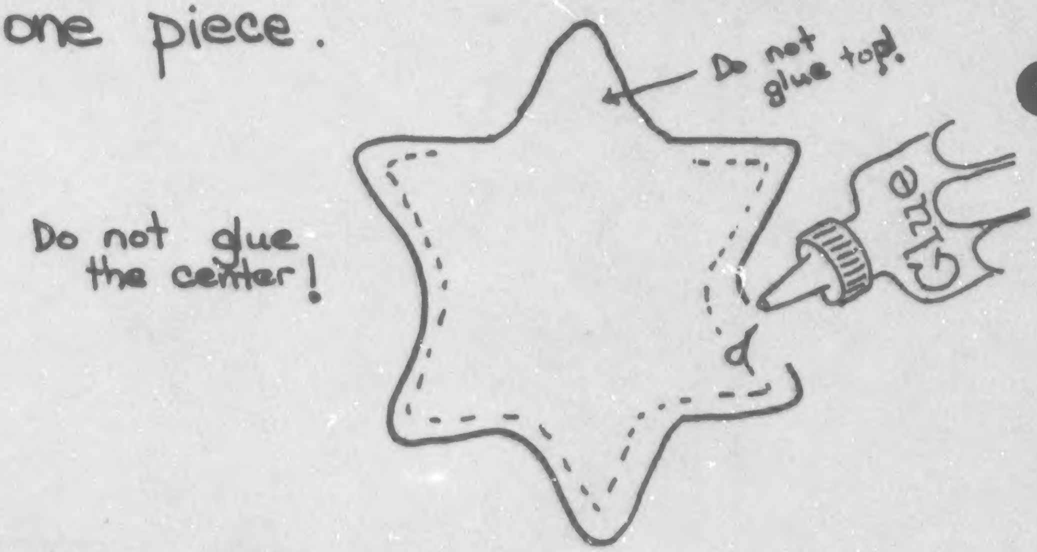


Student activity Sheet I

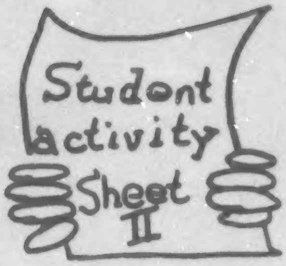
Winter-Time Decorations

1. Choose one pattern.
2. Trace around the pattern on two pieces of fabric.
3. Cut out the shapes.

4. Put a narrow line of glue around the sides and bottom of one piece.

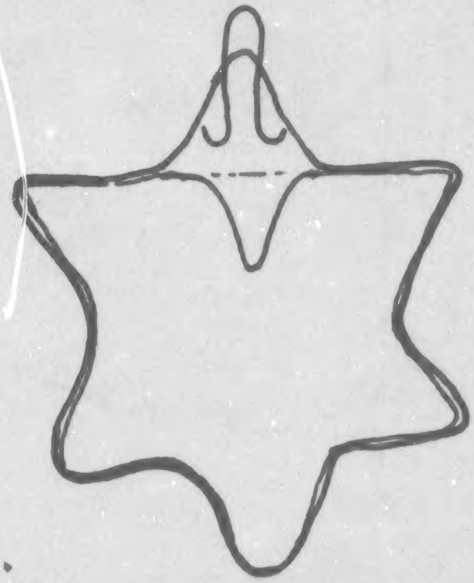

Do not glue top!
Do not glue the center!
Glue

5. Lay the other piece on top and press together.
6. Let dry.


Student
activity
Sheet
II

Winter-Time Decorations

Part 2



1. Bend out the ends of a hairpin.

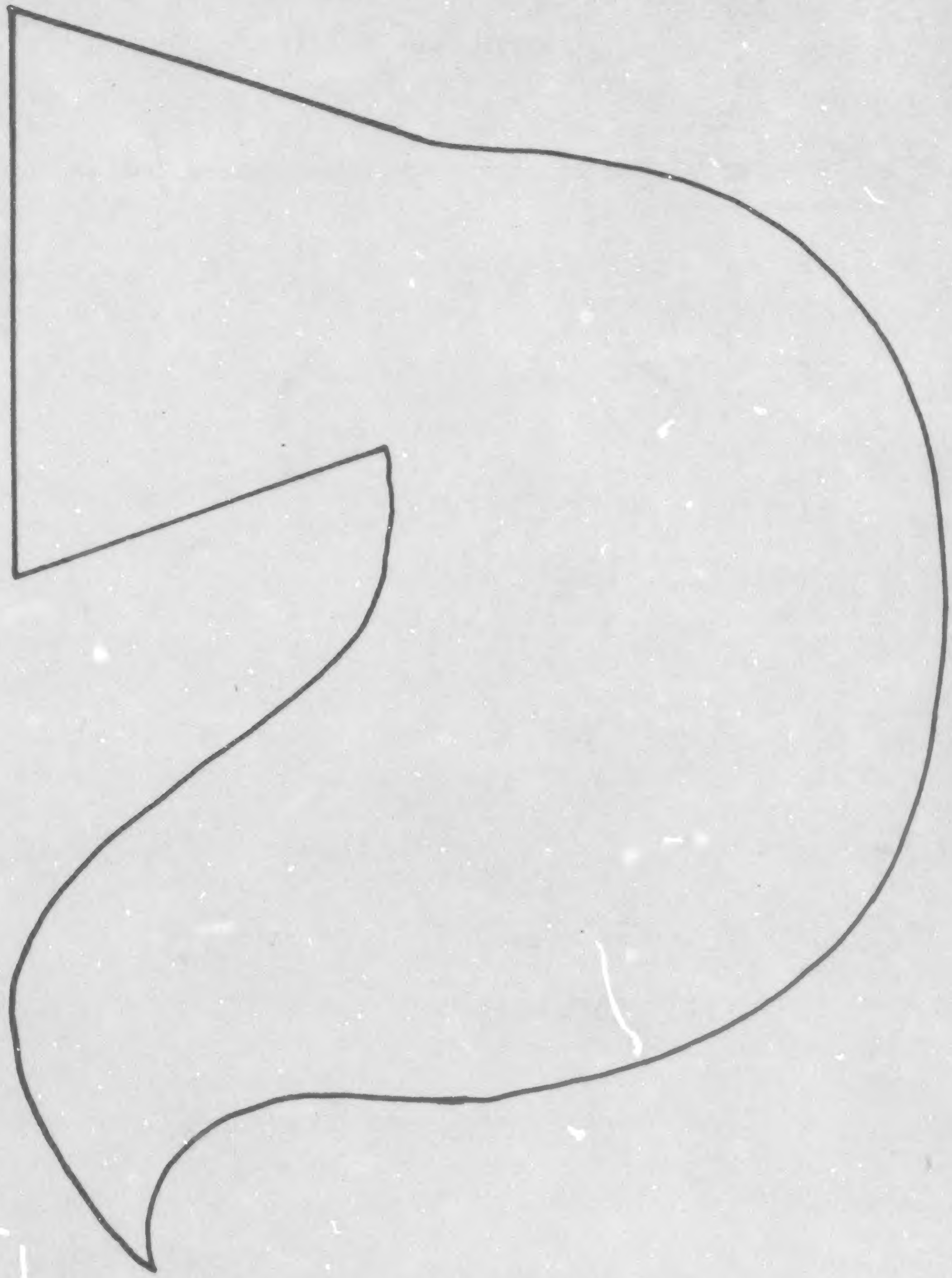
   Tape it to the inside top to make a hanger.

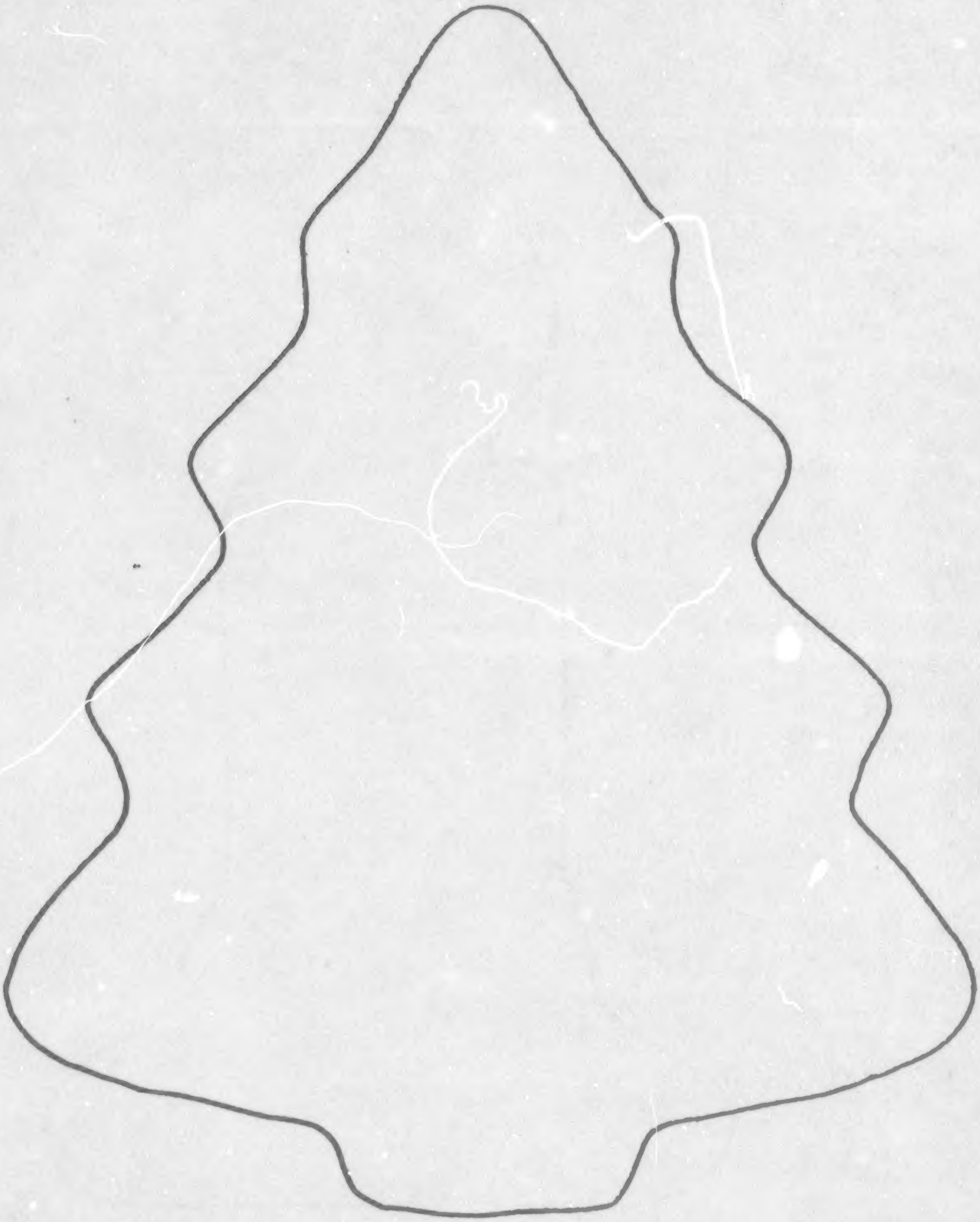
2. Stuff the shape lightly.

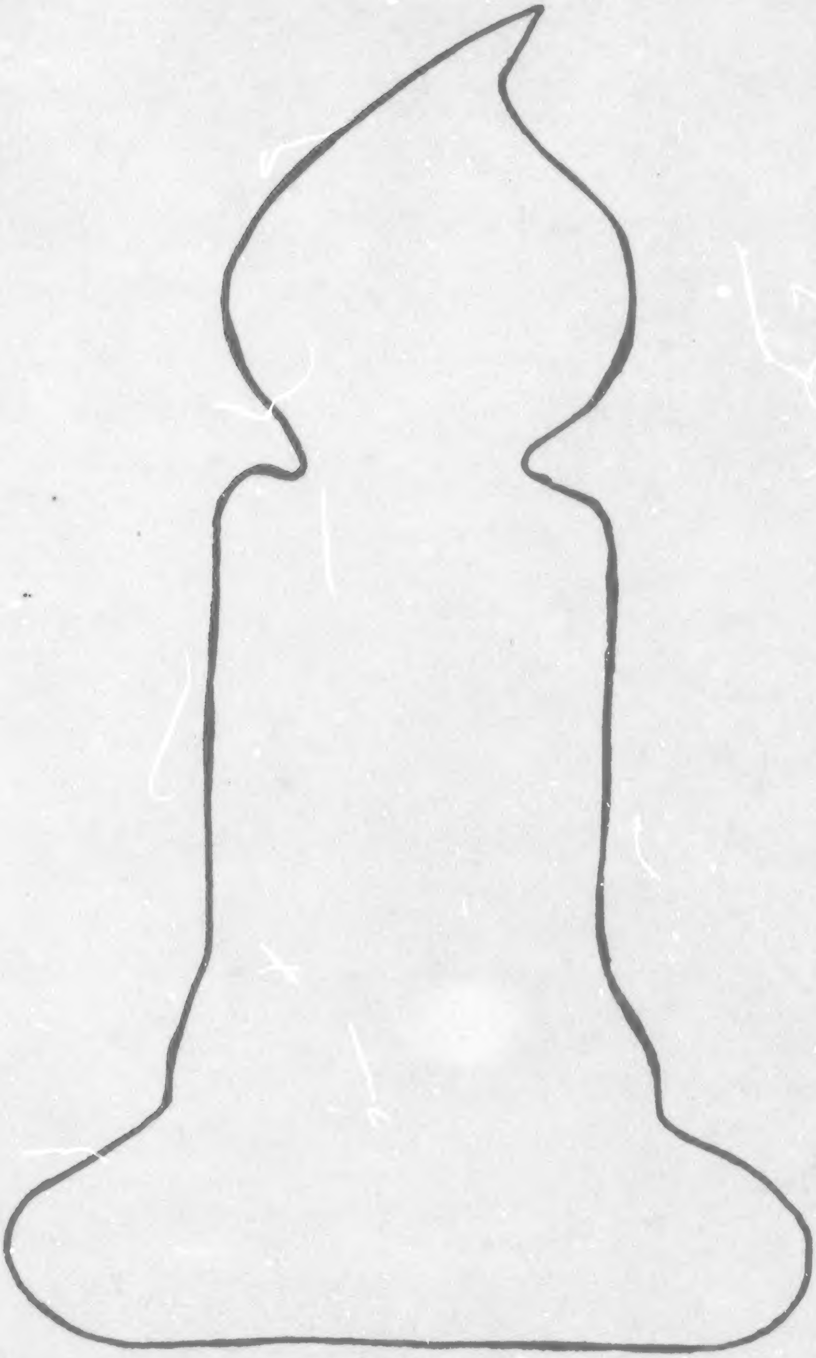
3. Glue the opening closed.

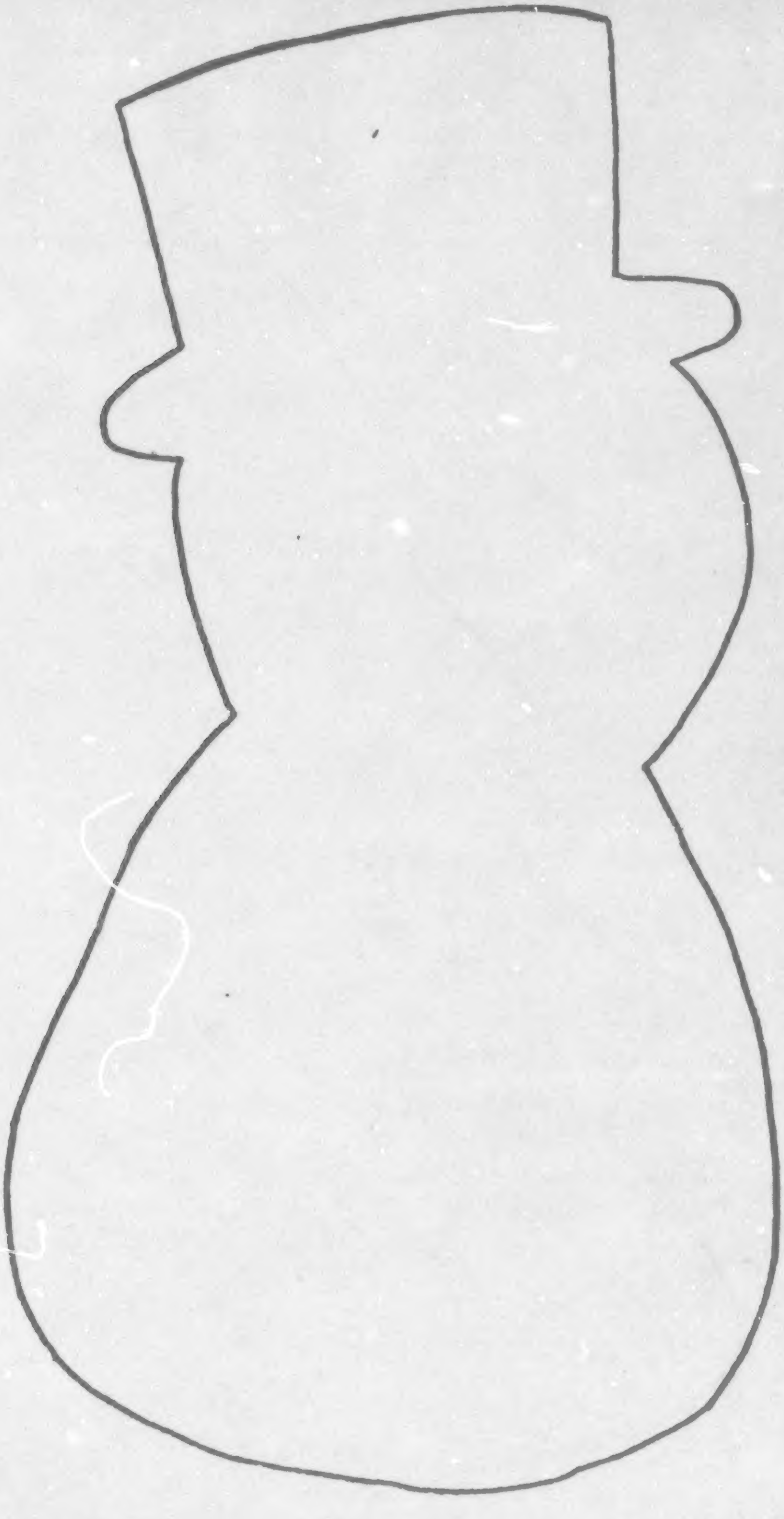
4. Decorate your shape.
   Cut and glue on trims.

5. How do the different trims feel?



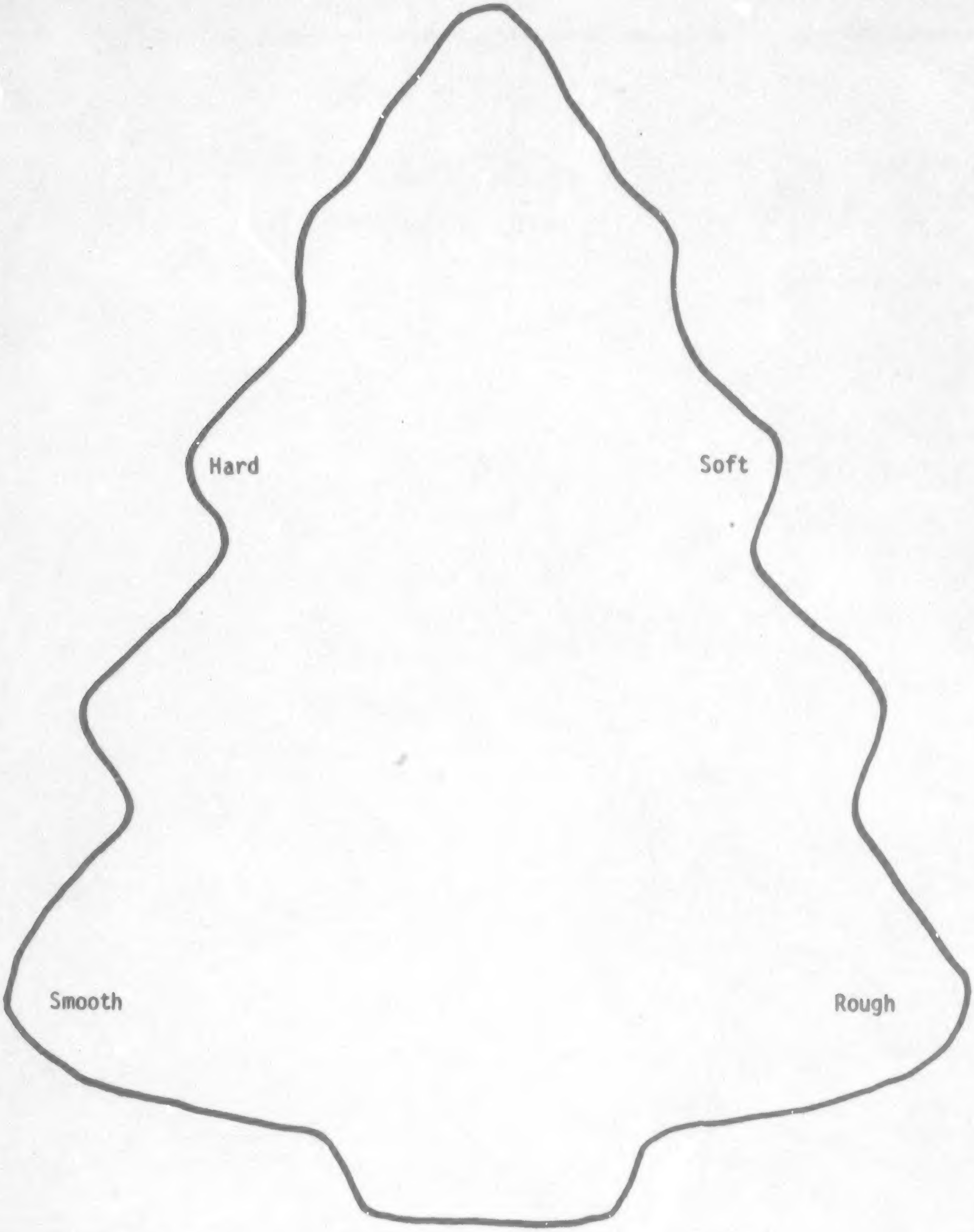






TEXTURE TREE WORKSHEET

Look through the trims. Cut off a small piece for each word below, and glue it beside the word.


Hard
Soft
Smooth
Rough

NAME ______________________________ ____________________

RESOURCE SHEET

FOR THE TEACHER:

Carbo, Marie and Nicholas Carbo. Happy To Be Me! Easy Primary Activity Cards. Willston Park, NY: Creative Teacher Publications, 1976. (P.O. Box 41)

Lorton, Mary Baratta. Workjobs Activity, Centered Learning For Early Childhood Education. Rolling Meadows, IL: Addison-Wesley Publishing Co., 1972. (1843 Hicks Rd.)

Purdy, Susan. Festivals For You To Celebrate. New York: J.B. Lippincott, 1969.

Richards, Roy. Early Experiences. New York: MacDonald Educational, 1972. (850 Seventh Avenue)

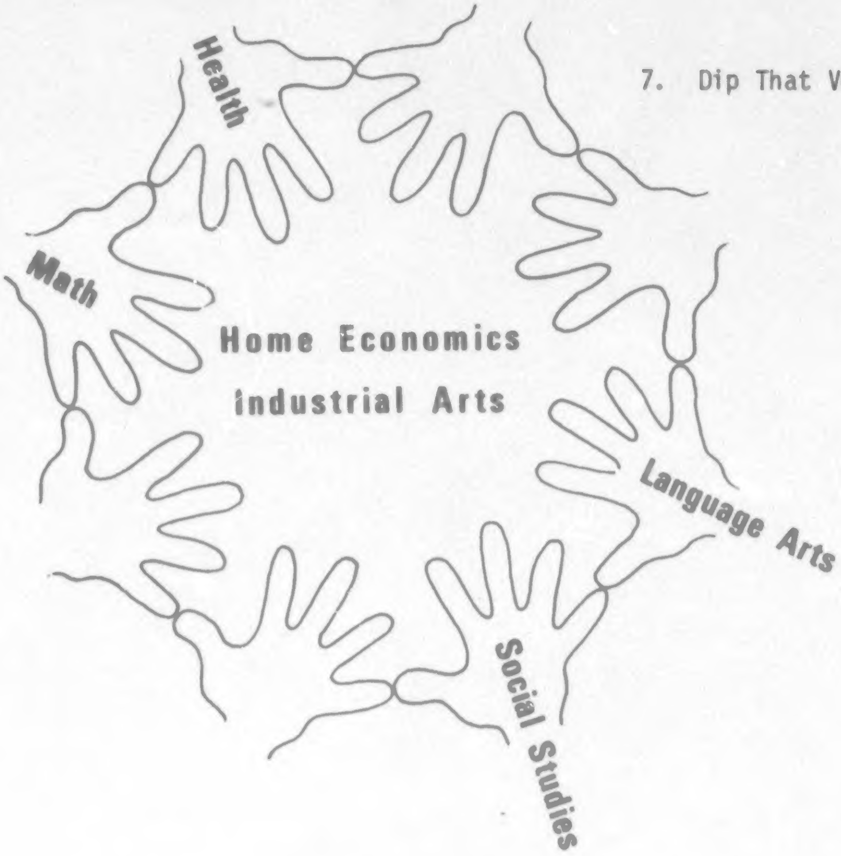
FOR THE STUDENT:

Lasker, Joe. All Kinds of Families. Chicago: Whitman Publishers. 560 West Lake Street)

Malbon, Elizabeth S. My Story and Way and My Special Places. Niles, IL: Argus Communications, 1976. (7440 Natchez Avenue) An easy to read book about "my" family being unique and special.

Senesh, Lawrence. Our Working World: Families. Chicago: Science Research Associates, Inc., 1973.

JOT IT DOWN!


Health
Math
Home Economics
Industrial Arts
Language Arts
Social Studies

7. Dip That Vegetable

Hands-on Approach

wichita public schools
wichita, kansas

ABCEE Activity Based Curriculum for Elementary Education

ACTIVITY BASED CURRICULUM FOR ELEMENTARY EDUCATION

ACTIVITY TITLE:

Dip That Vegetable

AREA TITLES AND MAJOR CONCEPTS:

Health
  Snacks can provide nutrients

Language Arts
  Creative writing

Math
  Metric measurement - milliliters, grams, and centimeters

Social Studies
  Marketing

DESCRIPTION OF ACTIVITY AND ENRICHMENT:

Each group of students will prepare a different dip and raw vegetable to provide experiences in selecting healthy snack foods. All the dips and raw vegetable strips are arranged on a buffet table for a class "tasting party." Each group then creatively names their dip.

RELATED CAREERS:

Nurse, Dietition, Food Scientist, Doctor, Dentist, Child Day Care Director, Parent, Home Economist, Health Teacher

SUPPLIES:

Groceries for dips and vegetables
Paper plates for tasting session
Napkins
Plastic storage sacks for vegetables
Cups for water

EQUIPMENT:

Equipment for Dips

mixing bowls
rubber scrapers
measuring spoons
measuring cups
can opener
large strainer
wooden spoons
chopping boards
paring knives
trays to carry equipment and supplies to mixing center
serving containers for dips, such as whipped topping tubs

Preparation of Vegetables

selection of vegetables
vegetable peelers
vegetable brush
paring knives
water and container for washing
chopping boards

Clean Up Table

dish pans
dish drainer
try to go under drainer
disposable dishcloths
tea towels
dish soap
liquid soap
plastic trash sack

ACTIVITY PROCEDURES:

1. Ask students to bring dip recipes from home to use for a "dip party." Use some of these recipes to make a dip recipe sheet. (Form for the sheet and dip suggestions are on page 6 .)

2. Divide the students in small groups. Each group selects one dip to prepare from the new Tips for Dips that has been compiled.

3. Previous instruction and nutrition games acquaints students with foods containing nutrients.

4. Plan preparation of dips and vegetables. Each group is to prepare one dip and one raw vegetable for a tasting party. The dips and vegetables are arranged buffet style so each student can taste all the foods.

5. In advance of preparation:
   a. Discuss measuring in milliliters (ml). Level measurements are important.
   b. Demonstrate, using a knife and chopping board. Discuss safety in using a sharp knife (page 4). Demonstrate size of vegetable pieces needed for dips. Make vegetable strips about 5 cm long.
   c. Instruct students in clean-up procedures.
   d. Discuss inviting guests and assign to a committee.
   e. Explore buffet service and appropriate manners.
   f. Each student lists the dip ingredients and equipment needed on small cards.

6. Work tables are arranged on preparation day.
   1. Table with equipment.
   2. Table with grocery supplies.
   3. Vegetable preparation table.
   4. Mixing center for dips.
   5. Clean-up center. (page 4)

7. Have groups start at each of the tables, #1, #2, and #3. Other groups can play a nutrition game used earlier in the classroom until space at a beginning table is available. Groups rotate until all have finished preparation and completed clean-up. The dips and vegetables are stored in the refrigerator.

8. Set up buffet table for the tasting party. Each student group arranges their vegetable attractively for the buffet table. Place a small spoon in each dip container. Provide paper plates for sampling. Greet guests. Enjoy the treat!

9. Send home Parent Letter (page 7). Have available the dip recipe sheet; some students may wish to take home recipes for their favorite dips.

10. After the tasting party, each group creatively names their dip.

11. Introduce "Empty Calories" and foods that fit this category. Which dips contain at least one food from a Basic Four Food Group? Which dips contain only foods from the "Extras" group?

12. For a math and career education experience, make bar graphs showing the number of people that liked each dip and number of people who like each vegetable used. Discuss the importance of surveying likes and dislikes in market research. What influence does the name have on a product's acceptability?

FOLLOW UP:

Have student groups write a T.V. or radio commercial for a dip, using the name given in class. A sales point should be the nutritional value. Present these commercials to the class with props. (Video-tape equipment would make it even more meaningful.) Conduct a class discussion on advertising. What sells a product? What should you think about when you see a new ad?

Save the can labels, lids, packages, and boxes from dip ingredients for nutritional value and cost information. Find the cost of the dips. Is a higher cost of certain dips justified? What about flavor differences and nutritional values?

Conduct brain storming session on all possible foods used as snacks. Pick out the bar graphs of snacks from Comparison Cards by the Dairy Council (page 11). Assign some of the remaining snacks to students to make comparative bar graphs (page 8), computing percentages from information in USDA Handbook (page 11). Hang all graphs on display in room. What do the graphs say about the snacks? Discuss empty calories--a food with very few nutrients; mostly just calories.

Have a parent or community resource person in related careers tell how they use nutrition information in their job.

Guess My Future--Write a separate career title on each card. Use the careers under Related Careers (page 1) and any other careers that use nutrition information in their job. One person draws a card. Other class members try to guess the career by asking yes or no questions. Allow 20 questions for each career card.

Use Resource Sheet listing Snack Kit (page 11) for ideas to use at home. Have students report back to class on new snacks they use from this sheet or other sources.

Continue study of nutrient use by the body in Health or Science units if this has not been completed before the activity.

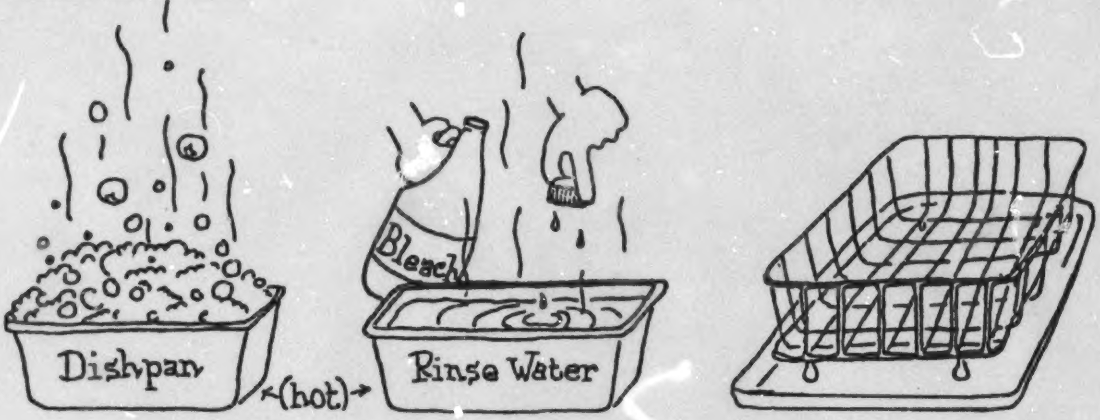
EVALUATION:

Each student fills out Snack Opinionnaire (pages 9 and 10). Have students verbally relate some of their answers. (Do not check the paper as a test, rather as increased knowledge in the field of nutritious snacks.) The check for nutritious snack or empty calories could be on the basis of the Basic Food Groups.

Ask for a show of hands for the number of students that tasted at least one dip they liked. Repeat for one vegetable they liked. This should let each student feel successful in the tasting experience. Discuss new tastes in the dips and vegetables.

HEALTH AND SAFETY PROCEDURES:

1. Wash hands before handling food.
2. Make sure that all work surfaces are clean.
3. Dips should be stored in refrigerator to prevent food poisoning.
4. Emphasize that paring knives are sharp. Handle carefully!
5. Demonstrate cutting on chopping board.
6. Do not place a sharp knife in the dishpan. Hold while washing and rinsing.
7. Use vegetable peeler by cutting away from yourself.
8. Wipe up spills immediately to prevent falls.
9. A plastic trash sack in the classroom trash can will aid in the disposal of vegetable peels, etc.
10. An extra dishpan and water will be needed for washing the vegetables.
11. Clean Up Station



Cut disposable dish cloths in half.

Carry clean, warm water to clean-up station in plastic jugs to prevent spills.

Have tea towels available for drying the dishes when air drying in the drainer is not possible.

Add one capful of liquid bleach to the rinse water for sterilization of the dishes.

Clean up is part of the activity and should be planned with the class.

TIPS TO THE TEACHER

1. Set cream cheese out of the refrigerator well in advance of preparation. It should be room temperature to mix in smoothly.

2. Organize serving buffet style so each student will have a sample of each dip and vegetable.

3. Dip recipes that students bring from home should be changed to metric measurement by the teacher before compiling the dip ingredient sheet--Tips for Dips. (Use page 6 for form and suggestions of dips to fill in where needed).

4. Do not use the name of the dip on student recipes. The students will make up names after sampling.

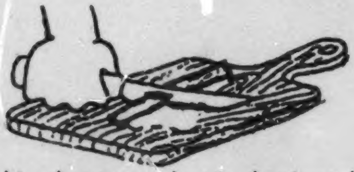
5. In purchasing vegetables for the activity, if possible, select a different vegetable for each group to prepare. Raw vegetables that can be used with dips are celery, carrots, cauliflower, cucumbers, green pepper, cabbage, zucchini squash, tomatoes, and radishes. Have students cut the vegetables in large enough pieces to use as finger food with dips.

6. Dips improve in flavor if stored in the refrigerator at least one-half hour before serving.

7. For experience in grams, have students weigh--minus container--tuna, deviled ham, dried beef, cottage cheese, and other ingredients which do not have grams on the label. The grams may vary slightly from recipe.

8. Guide the discussion during the activity toward the desired enrichment, but don't try to restrict it to that one topic.

9. Demonstrate how to use a small paring knife by cutting down on a chopping board. Do not cut toward fingers. Use vegetable peeler, cutting away from yourself.



10. In planning for activity have each student write the dip ingredients they will use on one side of a 3X5 card and make an equipment list on the back side.

11. Encourage all the students to try a small amount of each dip and vegetable.

12. The students experiences will be expanded if dip recipes used are not mixes in order to see the orgin of flavors.

13. The dip suggestions included in this activity uses a variety of base ingredients -- mayonnaise, sour cream, cottage cheese and cream cheese. Cheese spreads and yogurt are other possibilities. Which are low-fat? Which are from a Basic Four Food Group?

Student activity sheet

Tips for Dips

(1)

1 large can (113 g) deviled ham
1 small pkg. (85 g) cream cheese
100 ml crushed pineapple, drained

(2)

250 ml mayonnaise
50 ml catsup
25 ml vinegar
5 ml dried onion
10 ml sugar
1 drop hot sauce (opt.)

(3)

1 carton (227 g) sour cream
125 ml mayonnaise
1 small can (184 g) tuna, drained
5 ml dried onion
5 ml parsley flakes
1 ml garlic salt
5 ml Worcestershire sauce

(4)

1 carton (227 g) sour cream
100 ml finely chopped olives
25 ml anchovy paste
1 ml dried onion

(5)

125 ml mayonnaise
1 large pkg. (227 g) cream cheese
1 small jar (57 g) chopped pimient
1 small can (64 g) deviled ham
1 ml salt
Few grains of pepper
ml Worcestershire sauce

(6)

1 small carton yogurt
25 ml blue or roquefort cheese
10 ml vinegar
5 ml dill seed

(7)

1 carton (340 g) small curd cottage cheese

5 ml parsley flakes
5 ml dried onion
70 g dried beef, chopped
5 ml Worcestershire sauce

(May be put in blender)

(8)

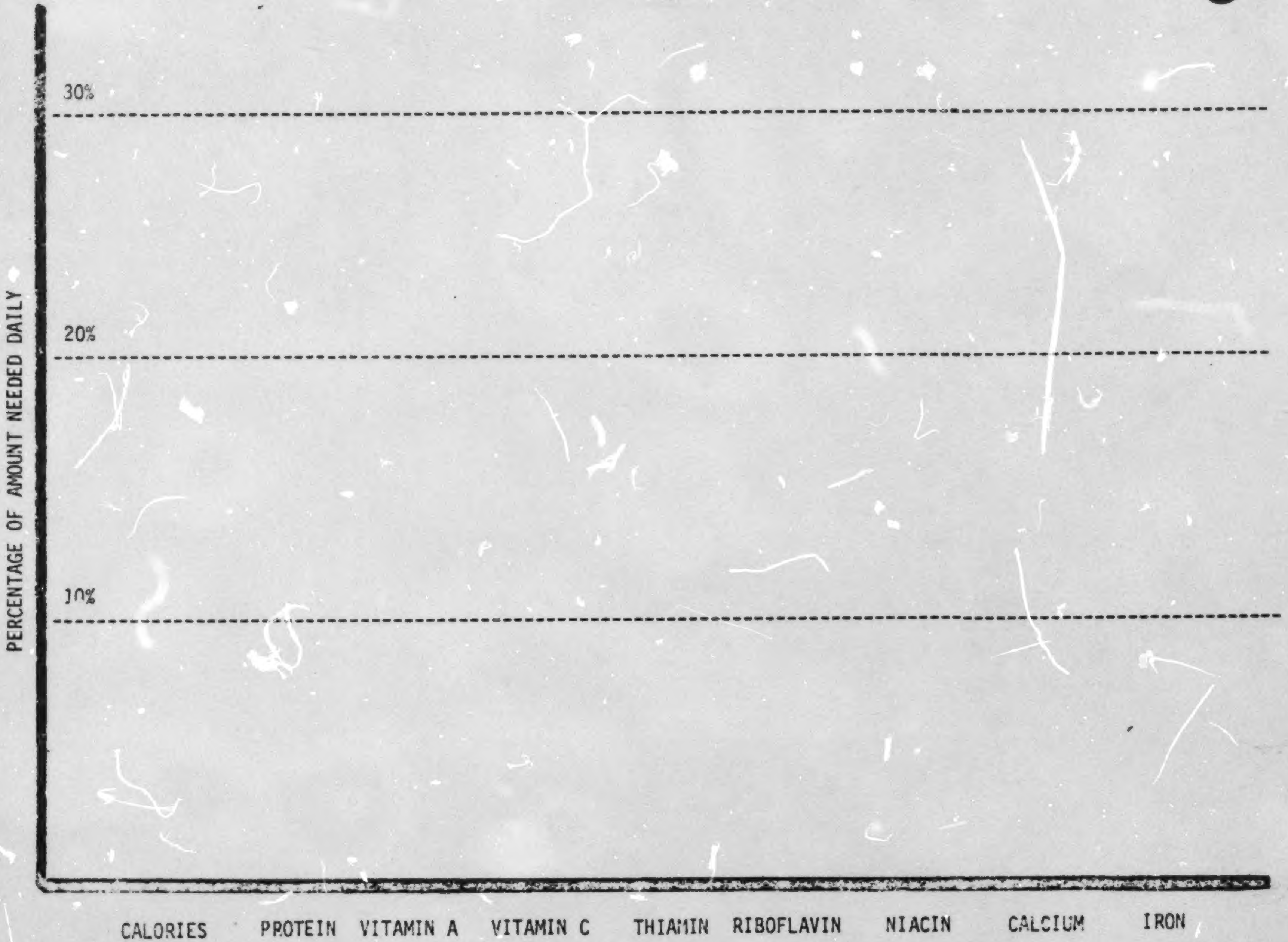
Dear Parent:

In health, we have been studying about foods for a balanced diet. We have found that snacks can be good, if they contain nutrients needed by the body. To try out some new ways to use vegetables as snacks, in class we prepared dips and raw vegetables for a tasting party.

If "good nutrition" is important to you, it will mean a lot to your child too. Please ask your child about the class tasting activity. What was in the dip you prepared? Was there a new vegetable served that you have never tasted before? Which dip was your favorite?

Perhaps at times you could plan with your child the foods to purchase for snacks. These could contain foods from Basic Four Food Groups, as well as calories.

Snacks can mean good eating, if planned!



RATE THAT SNACK ON A BAR GRAPH

OPINIONAIRE

Which snacks do YOU choose? (Rate each item with ✓s)

Snack Food	Eat Often	Eat Occasionally	Never Eat	Empty Calories	Nutritious Snack
milk					
cheese					
pizza					
peanuts					
cheeseburger					
chocolate milk					
French fries					
carrot strips					
hard-cooked egg					
pop					
celery					
milk shake					
candy					
orange					
crackers & cheese					
apple					
ham & cheese sandwich					
potato chips					
tomato juice					
pie					
cottage cheese					
raisins					
Koolaid					

OPINIONAIRE

Which snacks do YOU choose? (Rate each item with ✓'s)

Snack Food	Eat Often	Eat Occasionally	Never Eat	Empty Calories	Nutritious Snack
banana					
hot dog					
fruit juice					
popcorn					
cookies					
peach					
ice cream					
grapes					
prunes					
dried apricots					
bread					
dill pickles					

1. Name some snacks from the list that would be good if you were trying to lose weight and still have a balanced diet.

2. Which snacks would help you gain weight and also supply needed nutrients?

3. Write your four favorite snacks from the list on these two pages.

1.______________________________ 3.______________________________

2.______________________________ 4.______________________________

Which of these four favorite foods help meet some of your daily food requirements. (Use the Basic Four Food Groups as a guide).

RESOURCE SHEET

FOR THE TEACHER:

Cobe, Patricia. "Nibblers Notebook," Forecast for Home Economics. January, 1977.

Fresh Ideas. InterHarvest Inc. Marketing and Consumer Affairs (P.O. Box 2115, Salinas, CA 93901)
One copy of teachers kit free. Promotes fresh vegetables in children's diets.

McAfee, Oralie. Cooking and Eating With Children. Washington, D.C.: Association for Childhood Education, 1974. (3615 Wisconsin Avenue, N.W.)

Nichols, Nell. Farm Journal's Homemade Snacks. New York: Doubleday, 1976.

Nutritive Value of American Foods, Handbook, 456. Washington, D.C.: U.S. Department of Agriculture Offices of Communication.

Nutritive Values of Foods, Bulletin MF-309. Manhattan, KS: Cooperative Extension Service, Kansas State University, September 1975.

Snacks Kit. New York: Cooperative Extension. (Consumer Education, Room 1013, 11 Park Place, NY 10007)

"Super Snackin," Institute Ideas. Chicago: Wheat Hour Institute, (14 East Jackson, Blvd., 60604) Winter, 1975.

U.S. RDA Comparison Cards. Rosemont, IL: National Dairy Council, 1975.
The 57 cards illustrate the main nutrients in a serving.

Your Snacks: Chance or Choice? Rosemont, IL: National Dairy Council.
Poster and teachers guide #P507. Mini-Poster #036.

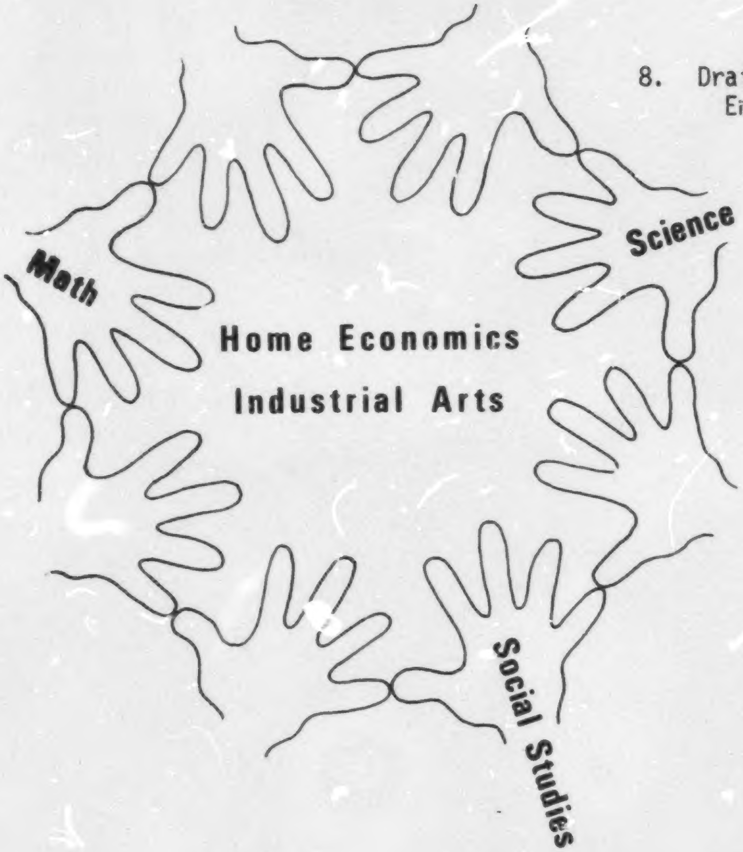
FOR THE STUDENT:

Nutrition Games. Newtonville, MA: Action for Children's Television. (46 Austin Street)
A colorful 22" x 30" bilingual poster to promote non-sugar snacks.

Pfeifer, Camille and Mary Snaith. Nourish: The Nutrition Card Game. Belmont, CA: Fun With Food, 1975. (P.O. Box 954)

Popin' Swap Game. Minneapolis, MN: The Pillsbury Company. (Box 60-090, Department 377, MN 55460)

8. Drafty Crack Critters - Energy Savers


Math
Science
Home Economics
Industrial Arts
Social Studies

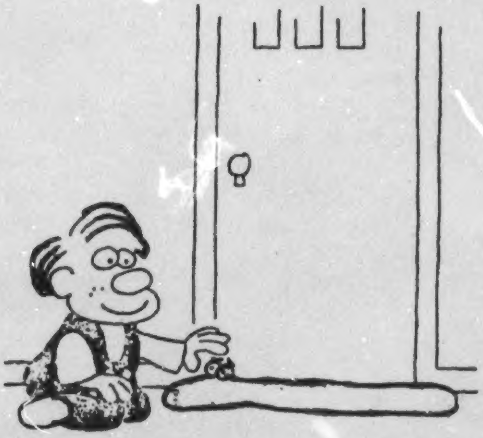
Hands-on Approach

wichita public schools
wichita, kansas

Activity Based Curriculum for Elementary Education

ACTIVITY TITLE:

Drafty Crack Critters - Energy Savers



AREA TITLES AND MAJOR CONCEPTS:

Language Arts
  Letter writing

Math
  Metric linear measurement

Science
  Energy conservation
  Recycled materials

Social Studies
  Consumer education

DESCRIPTION OF ACTIVITY AND ENRICHMENT:

Each student will make an energy saver critter from leftover or recycled materials to be used in their home at the bottom of doors or windows to stop drafts. The fabric is measured, sewed, and stuffed to make the tube critter.

RELATED CAREERS:

Textile Industry, Energy Advisor, Meter Reader, Builder Contractor, Government Official.

SUPPLIES:

Leftover knit fabric - each student needs one piece 1 m x 15 cm
Stuffing materials - hose, scraps of nylon or polyester
Small flat buttons
Knit scraps for trimming
White thread
Washable yarn pieces - various colors

EQUIPMENT:

Sewing machine
Meter stick
Centimeter ruler
Pins and pin cushions
Hand-sewing needles
Sharp scissors
Yarn needles

ACTIVITY PROCEDURES:

1. What is "energy?" Relate, using body energy to energy from other sources. Name sources of energy.

2. We pay for energy! Discuss the cost of food, gas, electricity, etc. By saving energy, you save your family money. What is another reason to be an energy saver?

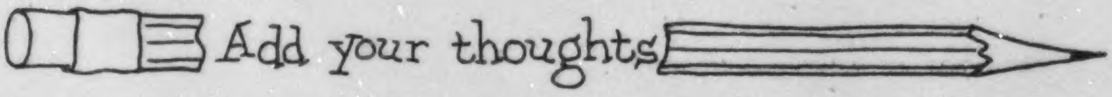
3. Have each class member write a letter requesting information on energy use in the home and United States. These letters might be written to utility companies, major appliance manufacturing companies, state and county extension services, major oil companies, government and local officials, etc. Use telephone books and magazines to get some of the addresses. A beginning list of addresses is on the Address Resource Sheet (page 12).

4. Send home Parent Letter (page 6) requesting scraps for critters.

5. Start critter, using Student Activity Sheet (page 7).

6. Have students report to class as returns from letter writing are received. Look for ways students can personally save energy. Record these energy saver tips in a notebook or on a classroom chart.

7. Have students play "Energy Race" in small groups (pages 8, 9, and 10) at various times during energy studies. By all students having repeated opportunities to play the game, energy tips will be reinforced.



FOLLOW UP IDEAS:

Learn to read electric and gas meters. Have each student keep track of one or both meter readings over a period of time, such as two weeks. Record the temperature each day on the chart used for recording the meter readings. The meters should be read approximately the same time each day. What influence did the weather have on kilowatts or cubic feet of gas used? Was there a difference for the days more family members were at home? How could this usage be reduced?

Have students count up all the uses of electricity in their home--electrical outlets, lights and lamps, appliances, entertainment, etc.

Explore questions related to energy.
Examples:
- Why is layer clothing warm?
- Why should we recycle?
- Which fibers are warmer?
- Why do utility companies recommend doing housework at night or early in the morning?

With all class members working together, write and publish a book of energy saver tips. Student jobs--such as illustrator, proofreader, editor, and binders--are needed and will relate the project to real life. Distribute these books as a community project.

Use two small wooden or cardboard boxes that are identical. Experiment with the results of using insulation. Using gloves, staple or glue leftover building insulation inside one of the boxes. Hang a thermometer inside each box so it will not touch the ground when upside down. On a sunny day, place the boxes outside. After two hours, check the temperature of each. Conduct other experiments by varying with double insulation; aluminum foil on the outside; plastic sheeting on the inside; or using other types of insulation.

EVALUATION:

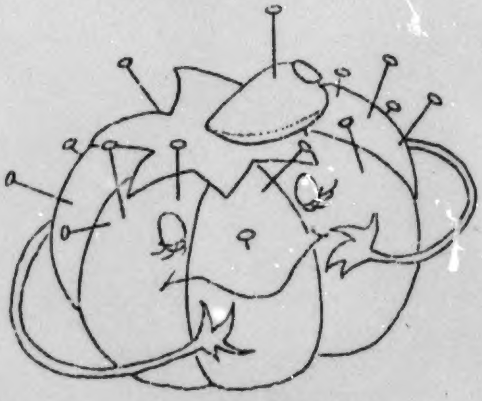
Have each student with a partner use an old magazine that contains many pictures of homes and families. Have them find some ways that energy is being saved and wasted in the magazine pictures.

HEALTH AND SAFETY PROCEDURES:

1. Allow only one student to work at the sewing machine at one time. (Exception: A student who has mastered the basic use of the sewing machine could be a student aid at that machine).

2. Demonstrate sewing machine safety to small groups. To have students practice before they sew on fabric, have each draw three straight lines on a sheet of paper. Sew on these lines without thread.

3. Remind students that fabric scissors are very sharp. Demonstrate proper use of scissors and cutting such as cutting with fabric on the table, not in the "air."



4. Do not allow students to put pins in their mouths. When not using pins, place in the pin cushion.

5. Unplug the sewing machine when not in use.

6. Shredded foam is not a good stuffing material. It should not be put in a washing machine because of danger of getting into lower working parts and should not be put in a dryer because it is very flammable.

Jotting Space

112

TIPS TO THE TEACHER:

(Write down pointers that would be helpful to you if you conducted this activity next year. Make notes as adventures progress).

1. Cut the elastic off of panty hose before using them to stuff the critter.
2. Thread the sewing machine with white thread. This is to be used by all of the students.
3. Students may need to press fabric scraps to remove wrinkles before measuring.
4. Narrow line felt markers eliminate the need for pressure when marking the cutting line on knits. Pressure to make a dark line will cause stretching. Narrow chalk could be used on dark colors.
5. Plan a demonstration on how to pin for sewing with the machine. Pins should be placed perpendicular to the edge of the fabric in order to sew without removing pins.
6. To backstitch at the beginning of seam, position the needle in the fabric; lower pressure foot; reverse stitching lever, turn wheel forward making three stitches backward; place stitching lever on forward; and start regular stitching. Hold thread ends for 2 stitches to prevent jamming.
7. It takes about seven pairs of hose to stuff a critter using 1 m of fabric. Light-weight nylon and polyester scraps could be cut in pieces and used for stuffing also.
8. Have the students sew off the end to fasten thread instead of backstitching when finished sewing.
9. Demonstrate measuring and marking a 1 m x 15 cm rectangle on brown craft paper. Since the critter is made from scraps, the students should know how to measure a rectangle both by using the natural edge (selvage) and also in the center of the fabric.
10. Demonstrate pivoting with the sewing machine at the corners. Stop with the needle in the fabric exactly at the corner (turn wheel with hand), raise pressure foot, move the fabric around, and lower pressure foot so stitching can proceed in next direction. Relate the word "pivot" to the action of a basketball player.
11. Don't worry about it being smooth after stuffing--critters are pretty lumpy.
12. Shorter pieces may be sewn together by machine to make the 1 m length.
13. Unused garments could be recycled to make the critters.
14. If possible, letters for energy information should be on paper with a school letterhead. Request single copies of materials.

Dear Parent:

As a combined language arts, science, and math activity, our class is making drafty crack critters.

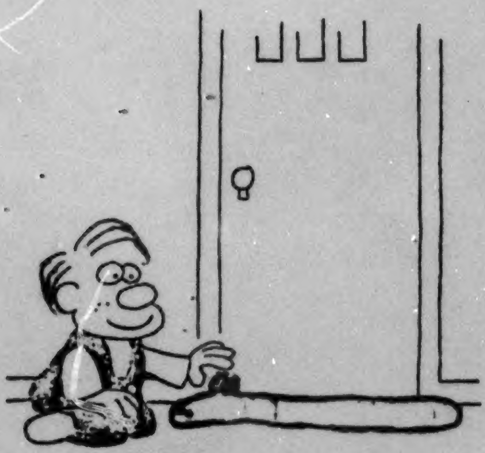
We will be using leftover materials to make these draft stoppers. Do you have some of the following items you can share with us?

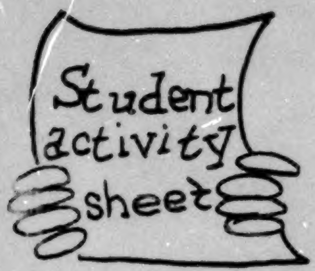
-double knit fabric scraps at least 40 inches long by 7 inches wide
-old nylon hose for stuffing
-flat buttons--2 alike for eyes, small

This activity will require the use of fabric scissors, sewing machine, pins, needles , and metric measuring tools.

Your child will be bringing home a draft crack critter to put at the bottom of a door or window. This would be a good time for your family to plan action for other ways to conserve energy in your home.

Thank you for your materials and interest.

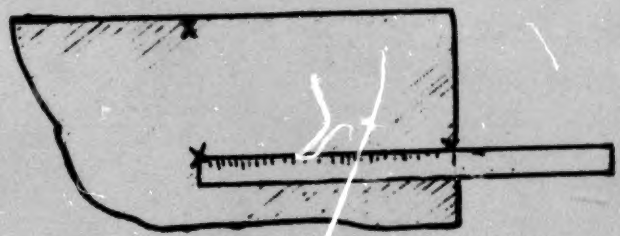




Drafty Cracky Critters

1. Select a piece of fabric for your critter.

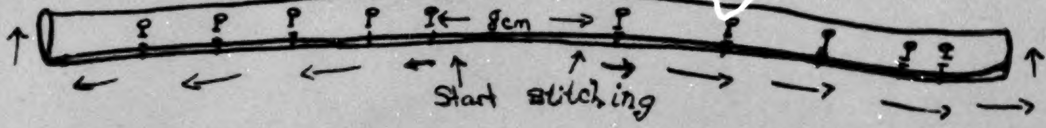
   Measure and mark a rectangle 1 m long and 15 cm wide.



2. Check your measurements again.

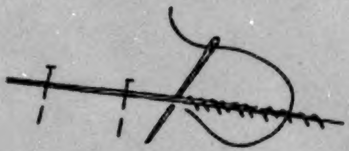
   Cut out the rectangle. BE CAREFUL! Fabric scissors are sharp.

3. Fold your fabric rectangle in half lengthwise. Pin it along the cut edges. Check to be sure right sides are together.



4. With the sewing machine, start stitching at the center. Place right side of the pressure foot even with the edge of the fabric. Sew along the side; pivot, and stitch across and on off the end.

   Repeat the stitching for the other end, leaving open a space about 8 cm wide in the center.



5. Turn your critter right side out and stuff. Hand sew opening closed.

6. Give your critter a personality. You may want eyes, eyelashes, mouth, toes, etc. Use buttons, embroidery with yarn, or applique on design.

   My plans are: ____

   ____

7. Your critter is now ready to stop some cold winter drafts. Find some other ways YOU can help save energy at home.

   To conserve energy at home I will: ______________________________

   ____

   ____

ENERGY RACE GAME
2 or 4 Players

1. Make a game board by using rubber cement to fasten game sheets (pages 9 and 10) in a file-type folder. (Color some areas with markers.) Laminating is recommended for durability.

2. Make plus and minus energy cards by cutting 3x5 note cards in one-half. Students could add to list of tips. Write one energy saver or waster on each card. Draw the plus or minus symbol on the back. (Two different color cards helps in separating the cards.) Provide a spinner and markers such as bottle caps, beans, or buttons. (Cards and markers could be stored in zip-top plastic bag to keep with game board.)

3. To play the game, shuffle each set of cards and place on game board. Each player takes turns spinning a number and then moves that number of spaces. When landing on a plus or minus square, take a corresponding card from the top of the pile, read aloud and follow directions.

IDEAS FOR CARDS

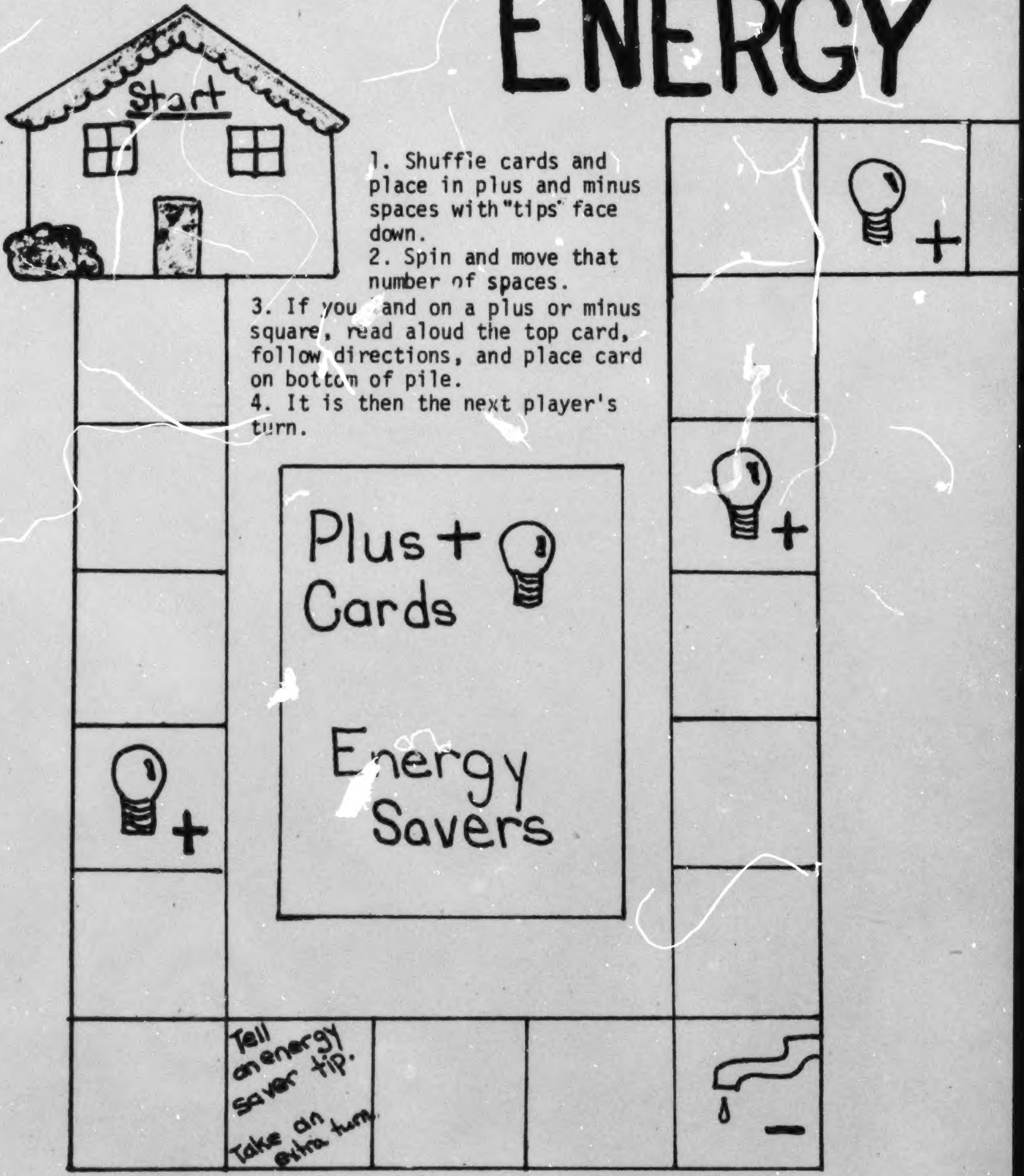
Plus

1. I rode my bike on an errand for Mom.
   Go ahead 2 spaces.
2. I took a shower instead of a bath.
   Go ahead 1 space.
3. I collected newspapers, cans, and glass for recycling.
   Go ahead 3 spaces.
4. It's a cold windy night. I put my fabric critter at the bottom of an outside door or window.
   Take an extra turn.
5. I closed the front door when I ran out to get a book out of the car.
   Go ahead 2 spaces.
6. It's a warm day. I washed my hair but didn't use a hair dryer.
   Go ahead 1 space.
7. I put on a sweat shirt instead of turning up the heat.
   Go ahead 3 spaces.
8. It's a cold cloudy day. I kept the curtains closed.
   Go ahead 2 spaces.
9. It's a very warm, spring day. I opened a window instead of turning on the air conditioner.
   Go ahead 2 spaces.
10. I turned off the electric range burner two minutes before I took my egg off.
    Go ahead 1 space.

Minus

1. I left the faucet dripping in the bathroom.
   Go back 2 spaces.
2. I forgot to turn off my bedroom light.
   Go back 1 space.
3. I opened the refrigerator door 5 times in half an hour.
   Miss your turn.
4. I went outside to dribble my basketball and left on the t.v.
   Go back 1 space.
5. It's a cold day. I left the garage door open.
   Go back 1 space.
6. I used hot water with the garbage disposal.
   Go back 1 space.
7. I left the oven on after baking a pizza.
   Go back 2 spaces.
8. It's a hot summer day. I left the south curtains open.
   Go back 2 spaces.

ENERGY

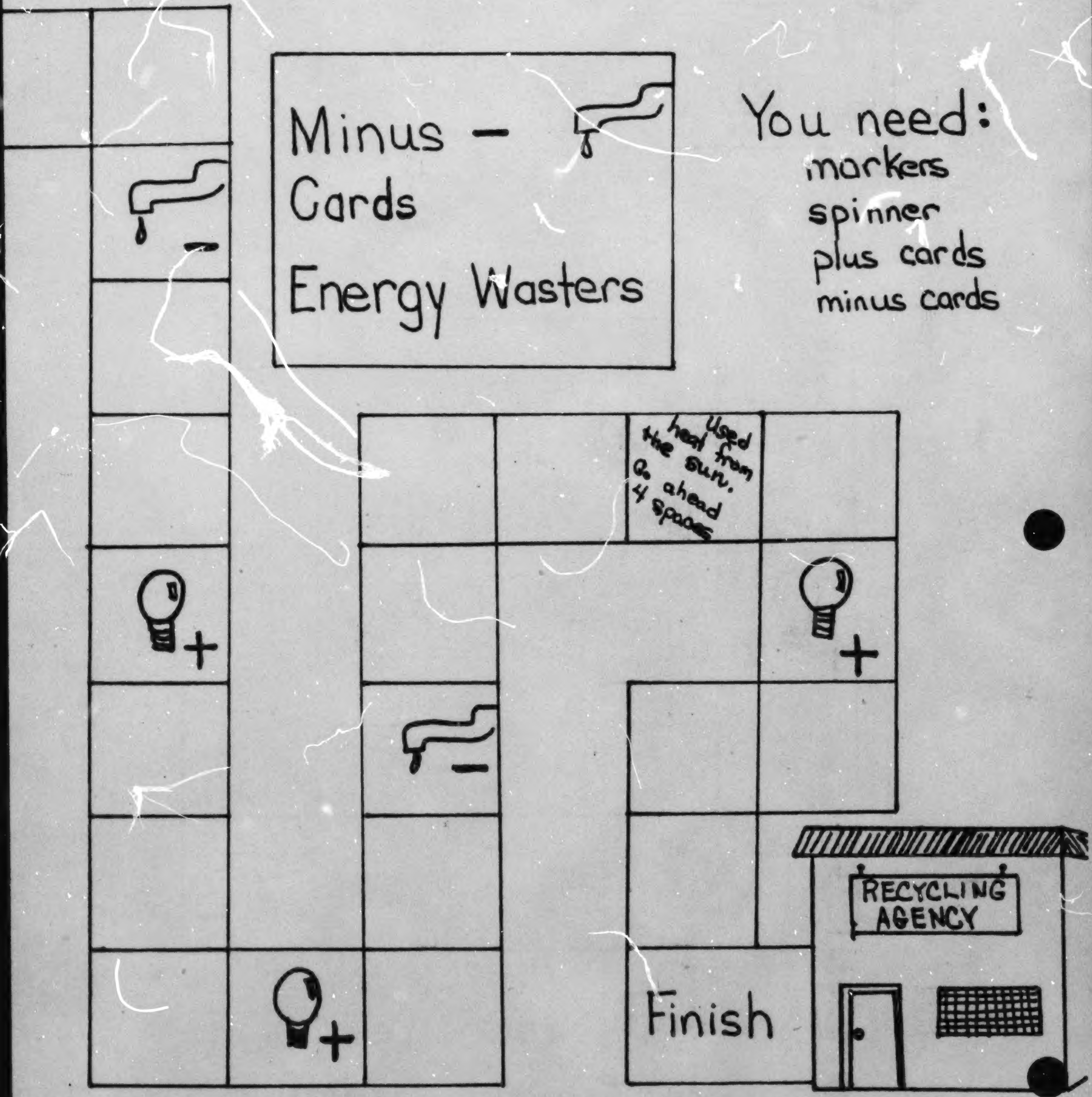

Start
Plus + Cards
Energy Savers
+
+
+
Tell an energy saver tip.
Take an extra turn.
−

1. Shuffle cards and place in plus and minus spaces with "tips" face down.
2. Spin and move that number of spaces.
3. If you land on a plus or minus square, read aloud the top card, follow directions, and place card on bottom of pile.
4. It is then the next player's turn.

Who will reach the Recycling Agency first?

RACE

You need:
- markers
- spinner
- plus cards
- minus cards


Minus – Cards
Energy Wasters
Used heat from the sun. Go ahead 4 spaces
+
–
Finish
RECYCLING AGENCY

RESOURCE SHEET

FOR THE TEACHER:

American Textile Manufacturing Institute. Save Energy and Have Fun With Textiles. Charlotte, NC: American Textile Manf., Inc., 1977. (400 South Tryon Street)
Contains many useful tips for saving energy in the home. One copy free.

Edison. Energy Conservation Experiments You Can Do. Southfield, MI: Thomas Alva Edison Foundation, 1977. (Cambridge Office Plaza, Suite 143, 18280 West Ten Mile Road)

Energy and Natural Resources; Energy In The Home; and Energy Conservation Activities. Wichita, KS: Curriculum Division. Environmental-Economics Modules for elementary classes.

Kehler, Sheery. It's Your Environment: Things To Think About--Things To Do. New York: Charles Scribner's Sons, 1976.
Excellent upper elementary level materials, introducing all areas of environmental studies.

Koestner, E.J. McDonald's Ecology Action Pack. Oak Brook, IL: McDonald's Corporation, 1974.

The Energy We Use, Community Workers and The Energy They Use, and Energy and Transportation. Oak Ridge, TN: ERDA Technical Information Center, 1977. (P.O. Box 62)
First, second, and third grade learning packets.

Oak Ridge Associated Universities. Conservation, Science Activities in Energy EDM-1049. Oak Ridge, TN: ERDA Technical Information Center. (P.O. Box 62)
An excellent series of simple experiments for upper elementary ready to present to students.

"Whiz Kids Take This Energy Quiz." Coed. May, 1977, page 28.

FOR THE STUDENT:

Energy Saver #7 Tips For The Young. New York: Con Edison Consumer Affairs. (4 Irving Place, Room 1625-S)
One copy free of this and other Energy Saver Books.

RESOURCE SHEET
ADDRESSES FOR ENERGY INFORMATION

American Gas Association, Education Services, Dept. INS, 1515 Wilson Blvd., Arlington, Virginia 22209.

American Textile Manufacturing Institute, 400 S. Tryon Street, Charlotte, North Carolina 28202.

Commonwealth Edison Company, Chicago, Illinois 60607.

Consolidated Edison Company of New York, Inc., 4 Irving Place, New York, New York 10003.

Consumer Affairs, American Petroleum Institute, 1801 K Street, NW, Washington, D.C. 20006.

Consumer Affairs Department, Sunbeam Appliance Company, 2001 S. York Road, Oak Brook, Illinois 60521.

Consumer Communications, The West Bend Company, West Bend, Wisconsin 53095.

Consumer Information, Public Documents Center, Pueblo, Colorado 81009.

Corporate Communications Dept., Union Oil Company of California, Union Oil Center, Box 7600, Dept. INS, Los Angeles, California 90051.

County Extensions Agents, 9000 West Central, Wichita, Kansas 67212. (This address is different for each county.)

Director, Youth and Educational Activities, Standard Oil Company (Indiana), Mail Code 3705, Dept. INS, 200 E. Randolph Dr., Chicago, Illinois 60601.

Edison Electric Institute, Dept. INS, 90 Park Avenue, New York, New York 10016.

Energy, Research, and Development Administration, Office of Public Affairs, Washington, D.C. 20545.

ERDA Technical Information Center, P.O. Box 62, Oak Ridge, Tennessee 37380.

General Electric, Housewares Business Division, 1285 Boston Avenue, Bridgeport, Connecticut 06602.

Institute of Scrap Iron and Steel, Inc., Dept. INS, 1729 H Street, NW, Washington, D.C. 20006.

Money Management Institute, Household Finance Corporation, Prudential Plaza, Chicago, Illinois 60601.

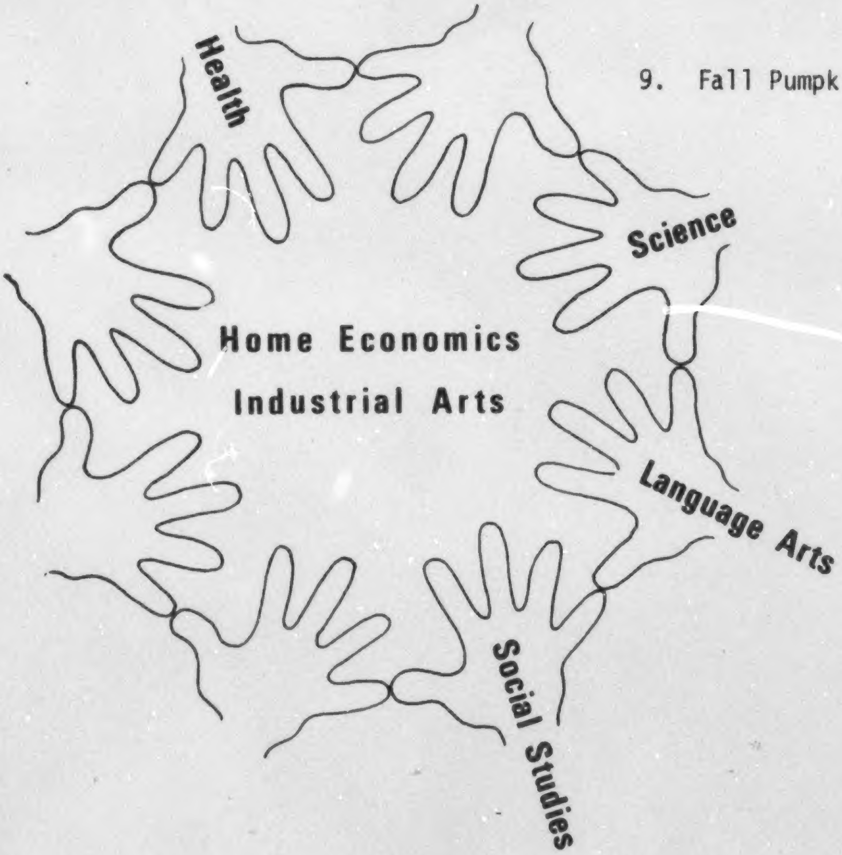
National Coal Association, Educational Services, Coal Building, Dept. INS, 1130 Seventeenth Street, NW, Washington, D.C. 20036.

Public Affairs Department, Exxon Company, P.O. Box 2180, Houston, Texas 77001.

U.S. Department of Commerce, National Bureau of Standards, Washington, D.C. 20234.

U.S. Department of the Interior, Bureau of Mines, Branch of Publications Distribution--INS, 4800 Forbes Ave., Pittsburgh, Pennsylvania 15213.

9. Fall Pumpkin Adventures


Health
Science
Home Economics
Industrial Arts
Language Arts
Social Studies

Hands-on Approach

wichita public schools
wichita, kansas

Activity Based Curriculum for Elementary Education

ACTIVITY TITLE:

Fall Pumpkin Adventures

AREA TITLES AND MAJOR CONCEPTS:

Health
  Nutrition
  Seeds provide protein
  Pumpkin - excellent vitamin A source
  Safety with a lighted jack-o-lantern and in the home kitchen

Language Arts
  Verbalizing feelings and observations
  Creative writing

Math
  Metric volume measurement
  Counting

Science
  Seeds we eat and plant
  Sensory development
  Changes in objects that are the result of heat
  Ecology - using all of a plant

Social Studies
  American Indians

DESCRIPTION OF ACTIVITY AND ENRICHMENT:

The class will use a pumpkin for a variety of learnings. In class, some of the seeds may be roasted to eat and the remainder dried for planting and/or counting. The students compare the raw pumpkin to cooked (canned) for experiences in touch, smell, appearance, and taste. The canned pumpkin is then used to make instant pudding or cupcakes for nutritious snacks. Changes in objects are observed by using heat to soften the pumpkin and by noting the results of exposing the inside of a jack-o-lantern or raw pumpkin to air at room temperature for a few days. The adventures are recorded on classroom charts or by individual students' writings.

REQUIRED FOR THIS ACTIVITY:

The teacher selects the adventures appropriate for their class according to age and desired learnings. It would not be expected that all the above experiences by conducted in any one class.

RELATED CAREERS:

Pumpkin Farmer, Grocer, Dietition, Horticulturist, Homemaker, Foods Editor.

SUPPLIES:(See pages 8, 9, 10, and 11 for recipes)

Roasted Seeds

- Seeds
- 5 ml salt
- 2 tablespoons margarine
- Paper towels

Pumpkin Pudding

- Instant vanilla pudding mix (allow 1 box pudding mix for 8 individual recipes)
- Milk 1 L per class
- Pumpkin pie mix - 85 g can per class

Pumpkin Cupcakes

- 6 cupcake recipe (page 10)
  - Yellow cake mix (Jiffy) 1/2 box
  - Pumpkin pie mix (85 g can) per class
  - Eggs - 1 small
  - Milk - 25 ml
  - Cupcake papers
- 12 cupcakes recipe (page 11)
  - Pumpkin pie mix - 1 can - 4 recipes
  - 1 medium egg
  - 75 ml milk
  - 1 box yellow cake mix (Jiffy)
  - Cupcake papers

EQUIPMENT:

Roasted Seeds

- serving tablespoon (to scoop out seeds)
- strainer
- trays
- knife

* Oven Method

- portable oven
- wooden spoon
- flat baking pan
- hot mitt

* Electric Skillet Method

- teaspoon measuring spoon
- wooden spoon
- electric skillet
- hot mitt

Pumpkin Pudding

- baby food jars (8)
- measuring tablespoons (3)
- plastic teaspoons
- can opener
- small pitcher for milk

Pumpkin Cupcakes

- mixing bowl
- measuring cup
- wooden spoon
- rubber scraper
- muffin tin
- oven
- oven mitt

- 2 tablespoons for dipping mixes
- can opener

CLEAN UP:

- hand soap - paper towels
- dish soap
- tea towels
- disposable dish cloths (cut in 1/4's)
- three plastic dish pans
- dish drainer
- tray for under drainer
- liquid bleach
- plastic trash sacks

ACTIVITY PROCEDURES:

1. Have a pumpkin in the classroom in advance and after activities for students to "pumpkin watch."

2. If cutting a jack-o-lantern (or cutting the pumpkin to bake), have the students observe the shape, smell, texture--inside and out. They can touch, poke, hold, smell, and even taste bits of cut-out eyes, nose, and mouth. Stress safety in using a knife.

   Write comments and observations on giant-sized Pumpkin Chart.

   Have students scoop out seeds, rinse, and spread on a tray to dry. These could be used for roasting, counting, and/or planting. Seeds are high in protein. They also have all the other nutrients needed by the baby plant until leaves develop.

   Light the jack-o-lantern. Talk about safety when using a candle. Ask the children how he looks? Friendly, smiling, funny, jolly? Discuss the word "lantern." This is a good time for favorite Halloween stories or poems.

3. If activities are being used in November, relate pumpkins to the first Thanksgiving feast. American Indians first grew pumpkins.

4. Plan and set up center for pumpkin activities.

5. Conduct hands-on pumpkin activities to expand learnings.
   Sample activities are:
   Roasted seeds - class project (page 8).
   Pumpkin pudding - made by each individual (page 9).
   Pumpkin cupcakes - small groups project (page 10 and 11).

6. Discuss ways of using a pumpkin. Why are fresh pumpkins only in the stores in the fall? Pumpkins are in the vegetable and fruit group. Vitamin A is important for healthy eyes. Pumpkins also contain other nutrients needed for healthy bodies.

   List sensory properties of ingredients and products prepared in class.

7. Send home Parent Letter (page 12).

FOLLOW UP IDEAS:

A jack-o-lantern may be kept in the room a few days to observe the changes caused by air and warmth.
Dry some of the seeds to plant.
Use the pumpkin for a real model in art experiences.
Write creative stories about pumpkins.

Cook the pumpkin or the eyes, nose, and mouth if jack-o-lantern is made, to demonstrate the effect of heat. These may be baked in the oven in a covered pan adding a little water or steamed in a sauce pan. How is the pumpkin different in texture, appearance, and smell after it is cooked?

After cooking some of the pumpkin to observe texture change, ask the question "Does heat charge everything like it did the pumpkin?" Let the children share their theories. Next go on a playground and hunt for pebbles. Place them in a saucepan with water. While the water simmers, talk about the characteristics of the pebbles before cooking. When they have simmered as long as the pumpkin, let them cool. What changes do you notice? Student observations of the raw and cooked pumpkin and the pebbles before and after simmering could be listed on a chart.

Use a pumpkin recipe for a classroom Thanksgiving feast.

a. The first "pumpkin pie" was probably made by slicing off the pumpkin top, removing the seeds, and filling it with milk and spices. A sweetener such as honey was added, and the pumpkin baked in the ashes.

b. The Apache Indians traditionally held a special ceremony to ask for a bountiful harvest of pumpkins, an important food. A young boy was sent into the woods to gather berries from the blue juniper trees. On his return, he was blindfolded and sent into the pumpkin patch to scatter the berries far and wide. This, everyone hoped, would make for a plentiful pumpkin crop.

Ask each child to guess how many seeds the pumpkin contains and record their estimates. They may want to change estimates after scooping them out. Have the children count the seeds in sets of 10 to determine the total amount.

Use the real pumpkins for math experiences.

1. Measure around the pumpkins. Find the best method--ruler, meter stick, or tape measure.
2. Observe the shapes of pumpkins. Are they round or oval?
3. When using several pumpkins, find the average weight or average distance around.
4. Figure the cost of the pumpkins after weighing.
5. Make graphs showing the growth of pumpkin seeds, measuring plants in millimeters.
6. Ask students to guess how many kilograms the pumpkin weighs. Record their estimates on a chart and then weigh on metric scales.

FOLLOW UP IDEAS - Continued

Use a pumpkin without carving to tape on paper eyes, ears, etc. As the season progresses, change expression and accessories, such as making a pilgrim or turkey. Place in coolest spot of the room.

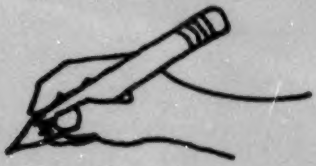
Have students collect and dry other seeds to compare with the pumpkin seeds. In the fall, many flowers, trees, and vegetables have mature seeds. Place each different seed on a card and label. Tack on a bulletin board. Discuss the shapes, sizes, colors, and weights of seeds.

PLEASE RECORD ALL BRAINSTORMS.

EVALUATION:

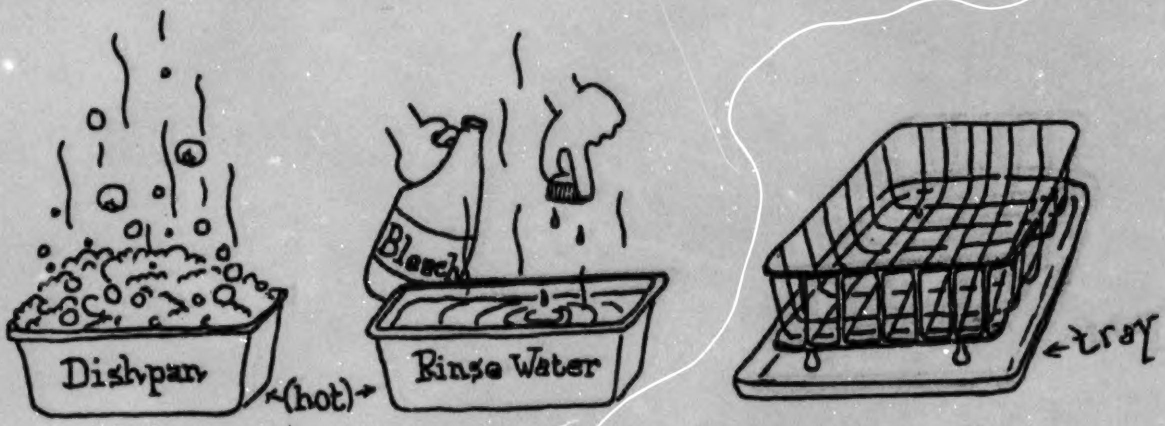
For the younger grades that cannot write sentences, make a large classroom poster to record verbal descriptions. "Our Pumpkin" sheet (page 13) could be used as an example of responses.

For students that can write sentences, have each one fill out the evaluation sheet called "Our Pumpkin" (page 13). You might prefer to have them only fill out part of it at a time.



HEALTH AND SAFETY PROCEDURES:

1. Wash hands before handling food.
2. Make sure that all work surfaces are clean.
3. Use wooden spoons in cooking to prevent the spoon from getting hot.
4. Use dry pot holders when pans are too hot to touch.
5. Knives are sharp. Carry with the points down. Cut away from yourself.
6. Be careful not to touch the sides of the broiler-oven; it will get hot.
7. Be sure to turn off and unplug appliances when finished.
8. Do not handle electrical appliances with wet hands.
9. Have only small groups of students watching or using the oven or hot plate at one time to prevent accidents.
10. Wipe up spills immediately to prevent falls.
11. Clean Up Station



Cut disposable dish cloths in half.

Have tea towels available for drying the dishes when air drying in the drainer is not possible.

Add one capful of liquid bleach to the rinse water for sterilization of the dishes.

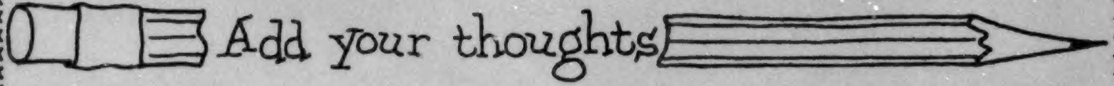
Cleanup is part of the activity and should be planned with the class.

Carry clean, warm water in recycled plastic jugs to the clean-up station.

TIPS TO THE TEACHER:

(Write down pointers that would be helpful to you if you conducted this activity next year. Make notes as adventures progress).

1. Don't expect level measurements when young children cook. The recipes will turn out good anyway. Skill in cooking is not a major concept.
2. Have spoons in food containers or canisters for dipping into measuring cup.
3. Turn on and preheat ovens for the students. Oven should be preheated only 5 minutes to conserve energy.
4. The pudding and cupcake activities are best in small groups of 3 to 4 working in a center. Groups rotate in the center until all have completed the activity. Have other centers set up or work for the children that are not in the cooking center.



ROASTED PUMKIN SEEDS

(Many of these tasks can be performed by students. The teacher should do all the cutting.)

Cut off the top of the pumpkin.

Remove the seeds by scraping out with a spoon or taking a fistful. Place seeds in strainer and rinse.

Spread seeds out on a tray to dry overnight.

Method I for Oven

1. Preheat oven to 212°C (350°F).
2. Put 2 tablespoons of margarine in a flat baking pan. Place in oven to melt.
3. Place seeds in pan.
4. Sprinkle with salt.
5. Toast in oven 15 minutes, stirring every 5 minutes. Do not let them get too brown.
6. Spread on paper towel to cool.

Method II for Electric Skillet

1. Heat an electric skillet to 184°C (300°F).
2. Place 2 tablespoons of margarine, 5 ml of salt, and the seeds in the electric skillet.
3. Stir with a wooden spoon 15 to 20 minutes. Do not let them get too brown.
4. Spread on paper towel to cool.

Method III for Salty Insides ·

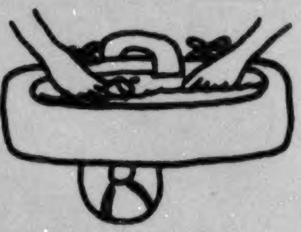
1. Wash seeds, but do not dry overnight.
2. Simmer seeds (occasionally stirring) in 2 L of water with 75 ml of salt added until seeds turn gray.
3. Place them on a cookie sheet and roast for approximately 30 minutes, or until they lightly brown in a 212°C (350°F).
4. Spread on paper towel to cool.

NOTE: Some people eat the whole seed while others crack the shell and only eat the "meat."

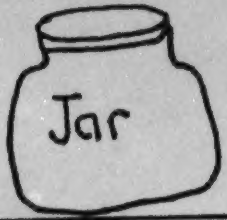
129

Pumpkin Pudding

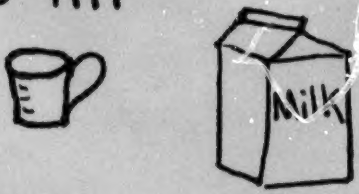
1. Wash hands



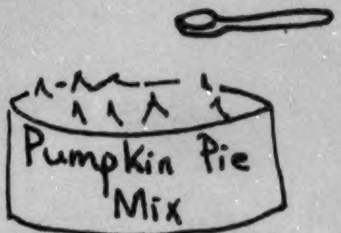
2. Get a jar



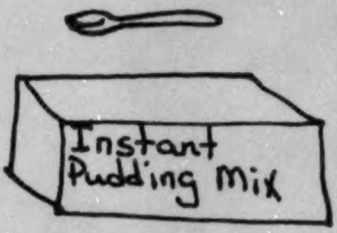
3. Put in 25 ml



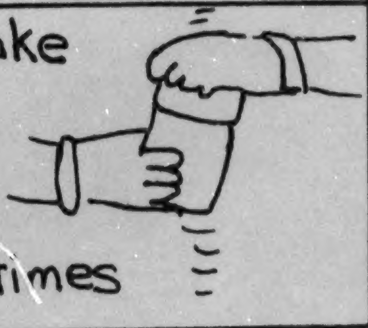
4. Add 15 ml


Pumpkin Pie Mix

5. Add 15 ml

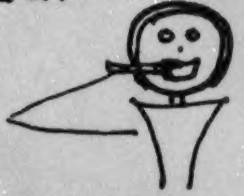

Instant Pudding Mix

6. Shake

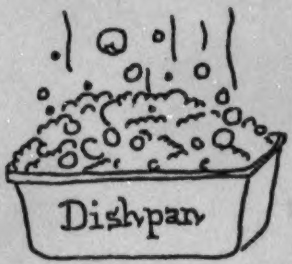


20 times

7. Eat



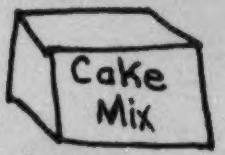
8. Wash jar

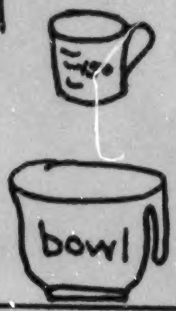


Pumpkin Cupcakes

Makes 6 cupcakes

1. Put 150 ml

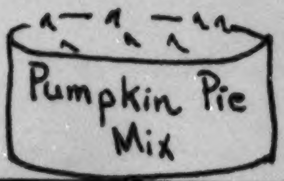




in a

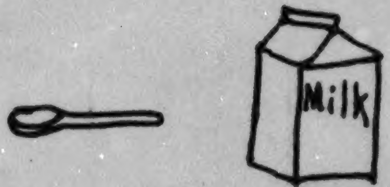
2. Break 1 egg into the bowl

3. Measure 75 ml


Pumpkin Pie Mix

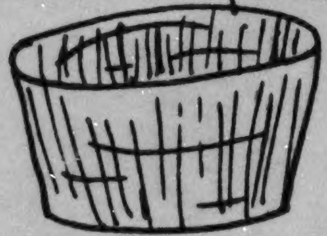
Put in bowl

4. Add 25 ml

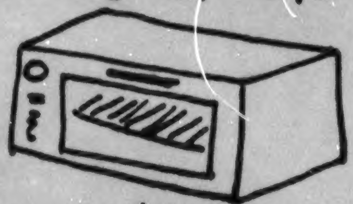


5. Mix well

6. Make 6 cupcakes

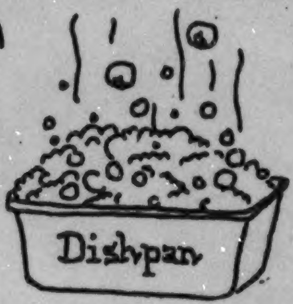


7. Bake at 375°F



for 15 to 20 min.

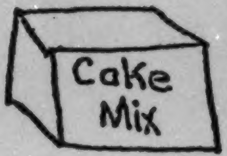
8. Clean up



Pumpkin Cupcakes

Makes 12 cupcakes

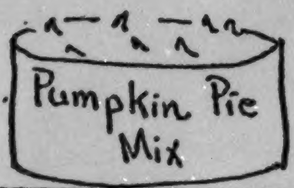
1. Put:



in a

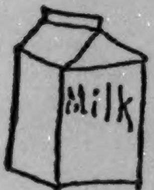
2. Break 1 egg into the bowl

3. Measure 150 ml


Pumpkin Pie Mix

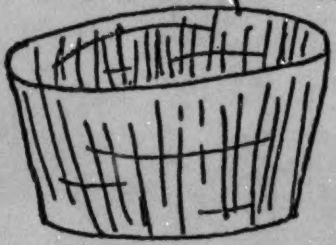
Put in bowl

4. Add 50 ml

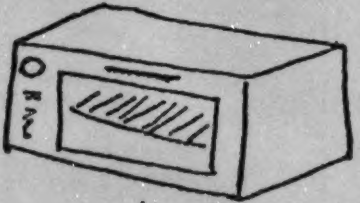


5. Mix well

6. Make 12 cupcakes

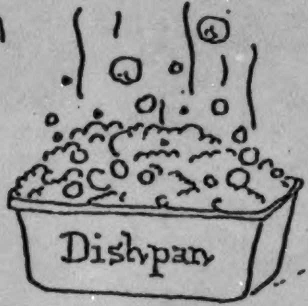


7. Bake at 375°F



for 15 to 20 min.

8. Clean up



Dear Parent:

As a combined science, language arts and health activity we are having "Pumpkin Adventures" in our class. We have been describing appearance, feel, and smell of pumpkin. The sensory aspect has been expanded by preparing a pumpkin recipe.

Pumpkin is a nutritious plant. It is especially high in Vitamin A. The seeds can also be roasted for a protein snack. Pumpkin can be prepared many ways. Below are some recipes you might like to try. Be sure to ask your child to help you. It can be a fun time together and a learning time.

In class we have talked about safety in the kitchen. Please remind your child of good safety practices often.

NOTE: These recipes use canned pumpkin pie mix that already has sugar and spices added.

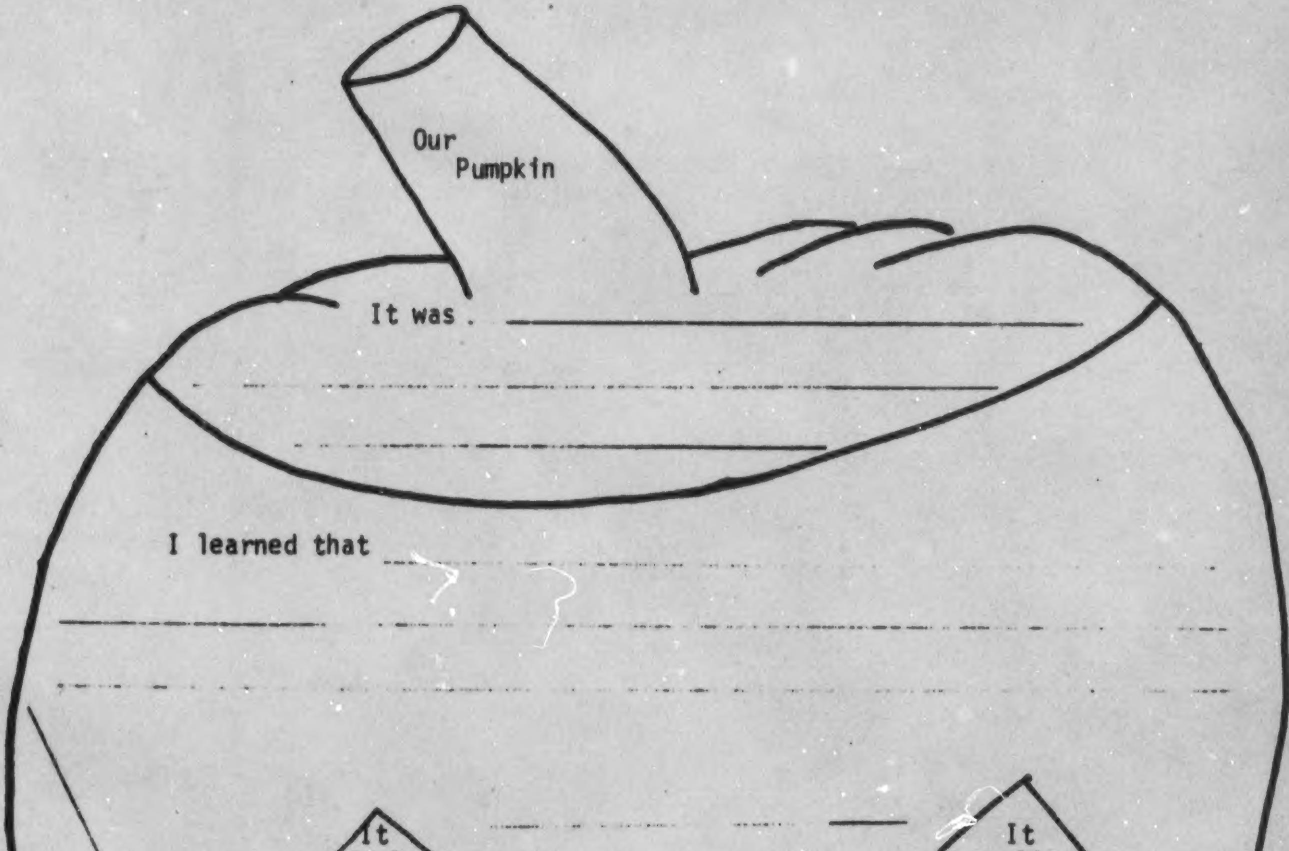
PUMPKIN CUPCAKES

1. Preheat oven to 375^{0}F.
2. Put in mixing bowl:
    - 1 box yellow single-layer cake mix (such as Jiffy)
    - 1 egg
    - 3/4 cup canned pumpkin pie mix (200 ml)
    - 1/3 cup milk (75 ml)
3. Mix well.
4. Use cupcake papers or grease muffin tins.
5. Fill 1/2 full. Bake for 15 to 20 minutes. Makes 14.

PUMPKIN PUDDING

(Serves 4 or 5)

1. Get a container with a tight lid that can be used to shake pudding.
2. Put in 1 1/2 cup milk. (350 ml)
3. Add 3/4 cup canned pumpkin pie mix. (200 ml)
4. Empty in 1 small box instant vanilla pudding mix.
5. Put on lid. Shake well while counting to 20 slowly.
6. Pour into serving dishes. Let set a few minutes before serving.



Our Pumpkin

It was

I learned that

It feels

It smells

What is this jack-o-lantern missing?

I saw

It tasted

Pumpkins are good

RESOURCE SHEET

FOR THE TEACHER:

Association for Childhood Education International. *Cooking and Eating With Children*. Washington, DC: Association for Childhood Education International, 1974.

Bacher, June Masters. "Go Bananas With Pumpkins and Gourds." *Instructor*. October, 1976.

Carlton, Denise. *Beginning Readers Cookbook*. Sunnyvale, CA: Ore Press Inc., 1976.

Crosby, Elizabeth. "The 77-Pound Guest." *Instructor*. October, 1976, p. 147.

Greene, Ellin. *Clever Cooks*. New York: Lothrop, Lee & Shepard Co., 1973. A concoction of stories, charms, recipes and riddles. Includes a story to read to the class related to the activity.

Grimm, Gary and Don Mitchell. *The Good Apple Math Book*. Carthage, IL: Good Apple, 1975. (Box 299).
Contains fifteen math activity sheets using pumpkins. Excellent follow-up material.

Fiarotta, Phyllis. *Sticks and Stones and Ice Cream Cones: The Craft Book for Children*. New York: Workman Publishing Co., Inc., 1973, pages 272-273.

Hallum, Rosemary and Edith Hom Newhart. "Early Education Workshop; Peter, Peter, Pumpkin Eater." *Teacher*. October, 1977, page 141.

Hallum, Rosemary and Edith Hom Newhart. "Early Education Workshop; Pumpkin Projects." *Teacher*. November, 1977, page 106.

Johnson, Georgia. *Metric Milk Shakes and Witches Cakes; Cooking Centers in Primary Classrooms*. New York: Citation Press, 1976.

Kindergarten Curriculum and Organization Guide. Wichita, KS: Wichita Public Schools, 1974.

Paul, Aileen. *The Kids' 50-State Cookbook*. Garden City, NY: Doubleday, 1976.

Tilson, Liza M. "*Pumpkin: Uncommon Explorations With Common Objects*." *Instructor*. October, 1977, page 152.

Wilhelm, Carolyn. "*Don't Carve That Pumpkin*." *Instructor*. October, 1977, page 213.

Williamson, Victoria. *Classroom Cookery, Primary Level*. Monterey Park, CA: Creative Teaching Press, Inc., 1975.

RESOURCE SHEET - Continued

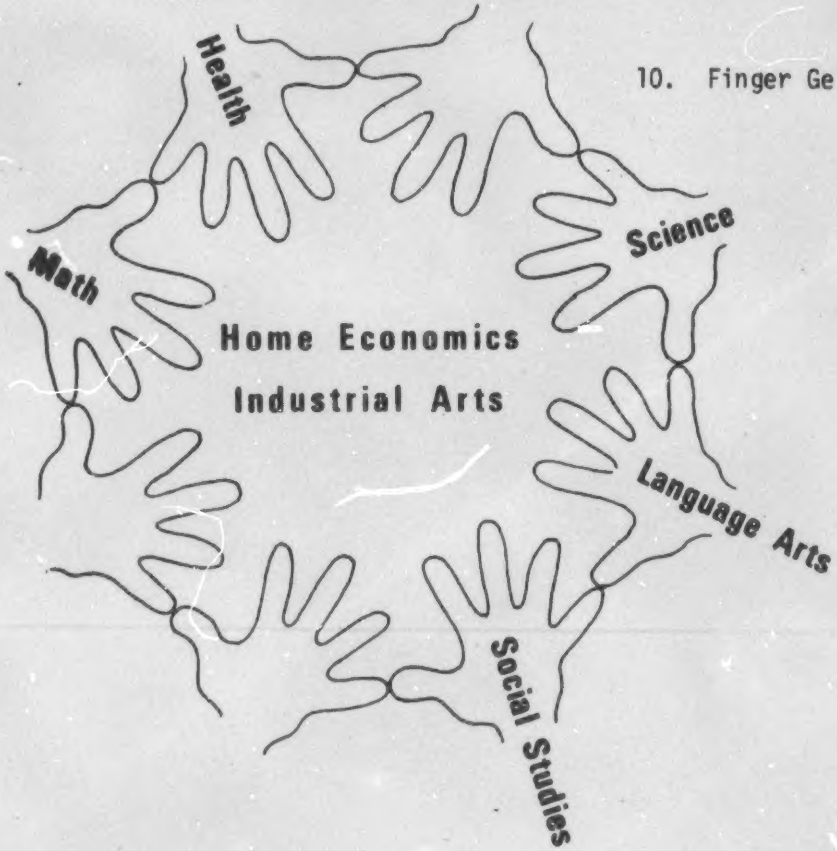
FOR THE STUDENT:

Ipcar, Dahlow. Bring In The Pumpkins. New York: Scholastic Book Services, 1976.

Johnson, Hannah Lyons. From Seed To Jack-O-Lantern. New York: Lothrop, Lee & Shepard Co., 1974.

JOT IT DOWN!

10. Finger Gelatin Snacks

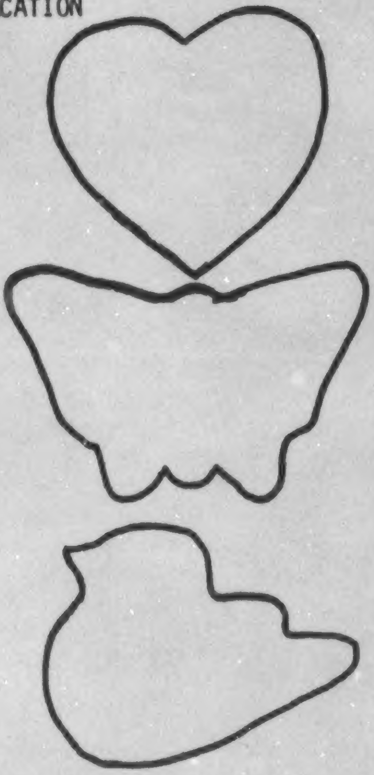

Health
Science
Math
Home Economics
Industrial Arts
Language Arts
Social Studies

Hands-on Approach

wichita public schools
wichita, kansas

Activity Based Curriculum for Elementary Education

ACTIVITY BASED CURRICULUM FOR ELEMENTARY EDUCATION



ACTIVITY TITLE:

Finger Gelatin Snacks

AREA TITLES AND MAJOR CONCEPTS:

Health
  Fruit group-fruit juice

Math
  Metric volume measurement

Language Arts
  Following directions
  Vocabulary

Science
  Manipulating liquids and solids
  Observing results of heat and cold
  Interaction of ingredients

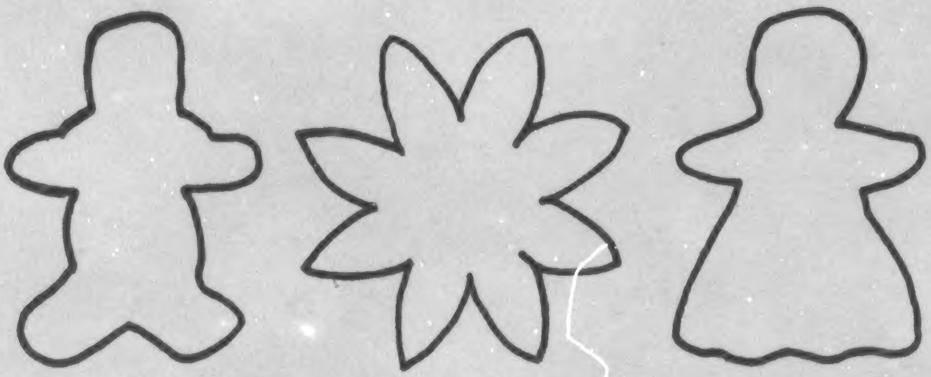
Social Studies
  Small group experiences

DESCRIPTION OF ACTIVITY AND ENRICHMENTS:

In a learning center small groups of students will prepare gelatin finger snacks using fruit juice for part of the liquid. The next day the gelatin will be cut into shapes and served as planned in class.

RELATED CAREERS:

Restaurant Cook, Dietitian, Nurse, Appliance Factory Worker, Orchard Worker.



SUPPLIES:

Unflavored gelatin - 1 envelope per recipe
Jello-1 package per recipe
Fruit juice (not fruit drink) frozen 6oz. can makes 5 recipes
Water
Napkins

EQUIPMENT:

Hot plate - oven mitt
Small saucepan or tea kettle
Metric measuring cups (2)
Pitcher for juice
Small clear glass or clear plastic cup
Mixing bowl
Wooden spoon
Rubber scraper
4 cm deep cake pans or recycled aluminum pans
Refrigerator
Small cookie cutters (open-top style) or table knife
Can opener
Tray for serving

CLEAN UP CENTER:

3 plastic dish pans (one for hands) dish drainer and tray
Tea towels
Dish soap
Liquid bleach
Disposible dish cloth (cut in ¼'s)
Paper towels for hands

PLEASE RECORD ALL BRAINSTORMS.

ACTIVITY PROCEDURES:

1. Plan in class a situation where a snack will be served.

2. Show the class an orange or fruit that will be used for juice in jello. Have them give you its name. Response "yes, it is an orange." What food group does it belong? "Yes, it is a fruit." Show a small glass of orange juice. Relate it to oranges and the fruit group, repeating the correct responses.

3. Set up a classroom learning center for preparing the Fruit Finger Gel Snacks. (Recipe on page 7). Small groups rotate until all the groups have prepared a recipe of gelatin ready for the refrigerator. Arrange for an aide or volunteer helper for the day to help in the center. They can give directions in hand washing, measuring, safety, clean up and encourage verbal responses on what is happening. Review the concepts that the juice is from an orange and it is a fruit.

4. The second day, the same group cuts the gelatin in small cookie cutter shapes, placing them on a tray with the other groups' shapes ready for serving. During the tasting session, encourage verbal descriptions of taste, feel, smell, shape, etc.

5. Terms may be introduced according to age level. Some related terms are: dissolve, steam, gelatin, chill, stir, pour, mix, measure, envelope, package, and milliliter. These terms may be used within reading assignments, spelling list or games.

6. Send home Parent Letter (page 8).

FOLLOW UP IDEAS:

Name other fruits that can be used for juice. (Have pictures of these fruits for younger children). We need some fruit each day to keep healthy. Squeeze some juice in class to taste.

Explore the area of what happens to solid Jello when heated. What happens when it is chilled again? What are other foods that become a liquid when heated? Experiment with heating, chilling, and freezing foods.

To practice alphabetical order, make word cards using terms selected from the recipe. Using one cutter (cookie shape) to cut cards would add interest. On the back side of each card, place a small number for correct alphabetical order. In a learning center, the student places the words in alphabetical order. Instruct them to check their order by turning cards over.

Practice measuring in the milliliter cup with popcorn. Assign special measurements. Have a partner check measurements. After all the children have been at the center, pop corn for treats and serve with fruit drink. Measure into individual cups with ml cup.

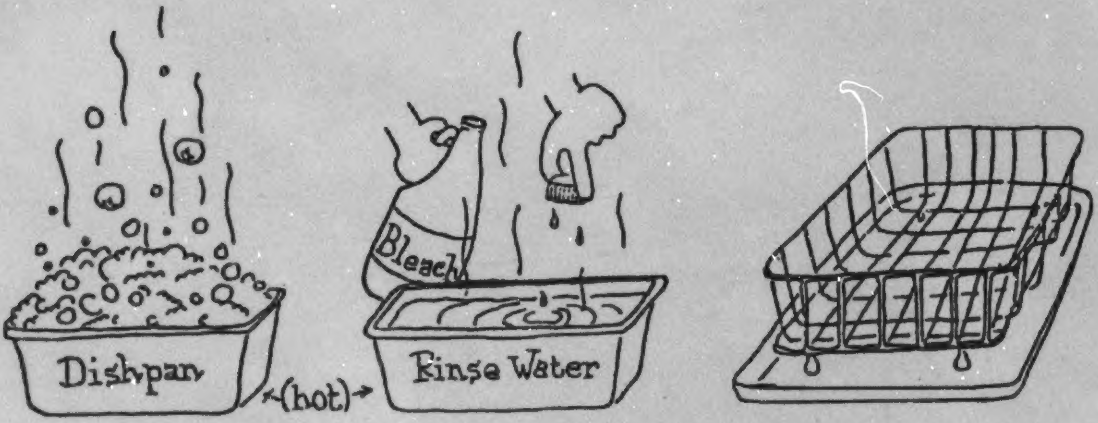
EVALUATION:

On a large classroom chart, write student dictated sentences about the Jello shapes, making the Jello and about fruit juice.

141

HEALTH AND SAFETY PROCEDURES:

1. Wash hands before handling food.
2. Make sure that all work surfaces are clean.
3. Use wooden spoons in cooking to prevent the spoon from getting hot.
4. Use dry pot holders when pans are too hot to touch.
5. Turn handles of pans on the hot plate so they will not be knocked off.
6. Steam burns!
7. Be sure to turn off and unplug appliances when finished.
8. Do not handle electrical appliances with wet hands.
9. Have only small groups of students watching or using the oven or hot plate at one time to prevent accidents.
10. Wipe up spills immediately to prevent falls.
11. Clean Up Station



Cut disposable dish cloths in half.

Have tea towels available for drying the dishes when air drying in the drainer is not possible.

Add one capful of liquid bleach to the rinse water for sterilization of the dishes.

Cleanup is part of the activity and should be planned with the class.

Carry clean, warm water in recycled plastic jugs to the clean-up station.

TIPS TO THE TEACHER:

1. Jello alone is not in one of the Basic Four groups, but is an extra.

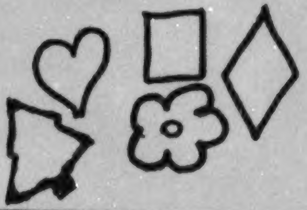
2. Do not expect young children to measure accurately. This recipe will turn out good with variances in liquid.

3. Arrange for another person to work in the classroom the day of preparation in younger classes. This may be a school aide, parent or grandparent, upper level student, etc. One person should be with the cooking group to give help with directions and promote discussion. They should not do the measuring or work for the children.

4. Instruct the children to cut the shapes close together to have more shapes for serving.

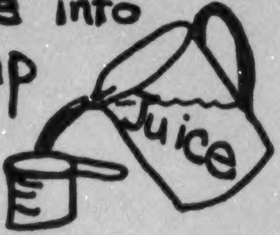
5. Heat water until steam is visible. Have children measure water before it is heated to reduce danger of burns. Have children watch for steam, but an adult pour it into Jello for very young children.

6. Use a clear glass or plastic cup to soften envelope of gelatin in juice so children can see process.

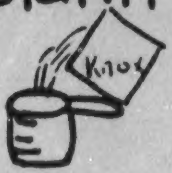


Jell-o Shapes

1. Pour 125ml juice into a cup

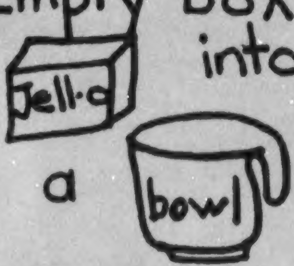


2. Add envelope of gelatin



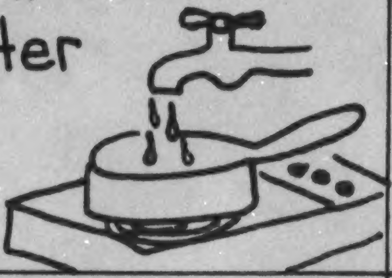
Set aside

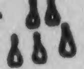
3. Empty box of

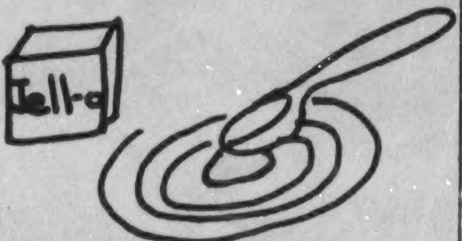


into a

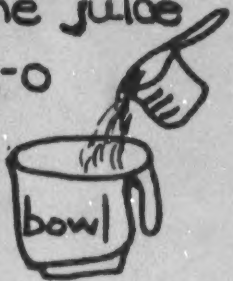
4. Heat 200ml water



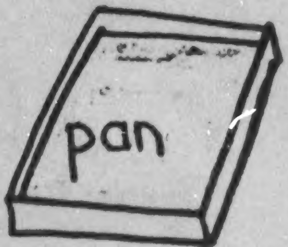
5. Stir  into



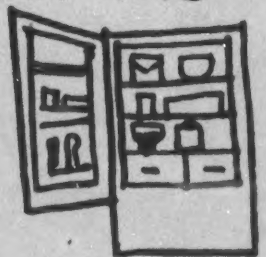
6. Combine juice and Jell-o



7. Pour into a



8. Put in the



Dear Parent:

We had a special activity in class this week. The children made finger Jell-O shapes. By reading the recipe we are learning new terms and how to follow directions. It also provided an opportunity to work with liquids and solids.

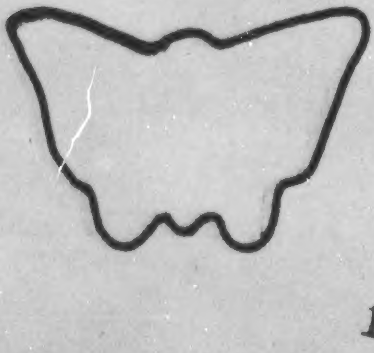
For part of the liquid in the finger Jell-O, we used fruit juice. Fruit juice counts as fruit in the foods needed by the body each day.

Your child will probably enjoy telling you about our experiences.

Below is the recipe we used. When you make this, please ask your child to help. It will expand learnings from class.

FINGER JELL-O

1. Measure 1/2 cup orange juice. Add one envelope of unflavored gelatin. Set aside.
2. Put in a mixing bowl 1 package of Jell-O. Add 1 cup of very hot water. Stir until dissolved.
3. Combine mixtures.
4. Pour in cake pan or other flat pan. Chill several hours or overnight.
5. Cut into squares or cookie cutter shapes.



RESOURCE SHEET

FOR THE TEACHER:

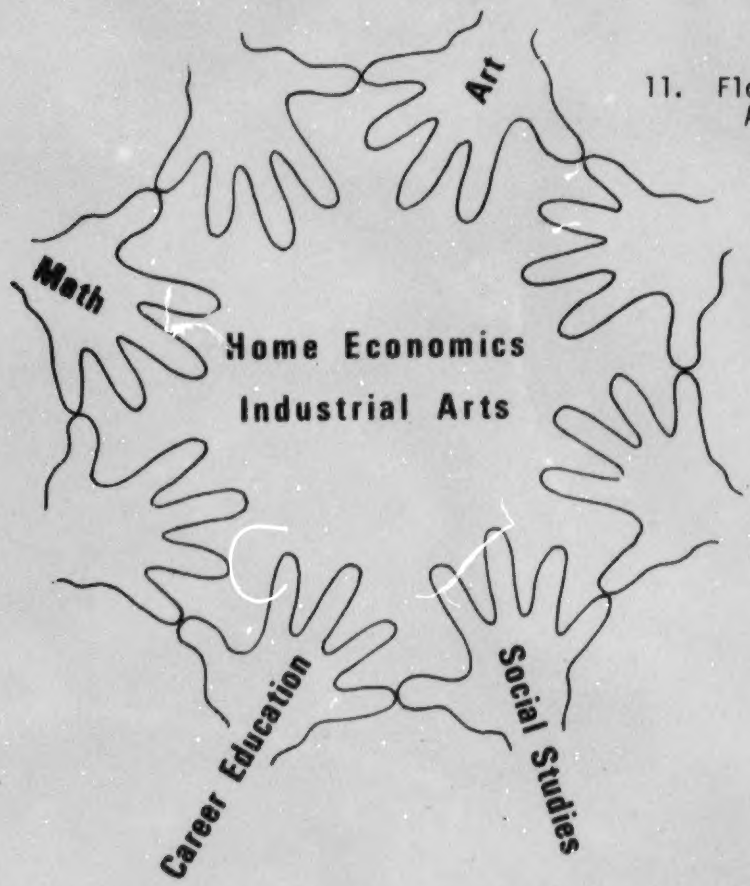
Bruno, Janet and Peggy Dakan. Cooking in the Classroom. Belmont, CA: Fearon Publ. Inc., 1974.

National Dairy Council. Nutrition Education Workshops and Unit Materials. Rosemon, IL: Dairy Council Inc. (6300 North River Road) Provided free for kindergarten, second, and fifth grade teachers.

FOR THE STUDENT:

James, Evelyn. New Funtrition Coloring Tear Sheets. Denver, CO: American School Food Service Association, 1974. (4104 East Iliff) Nutrition coloring sheets and simple crossword puzzles can be reproduced from this booklet.

That's a good one..
write it down!


Art
Math
Home Economics
Industrial Arts
Career Education
Social Studies

11. Flower Cube On The Assembly Line

Hands-on Approach

wichita public schools
wichita, kansas

Activity Based Curriculum for Elementary Education

ACTIVITY BASED CURRICULUM FOR ELEMENTARY EDUCATION

ACTIVITY TITLE:

Flower Cube On The Assembly Line

AREA TITLES AND MAJOR CONCEPTS:

Art
  Aesthetic values

Math
  Metric linear measurement
  Geometry - cube, angle, vertical

Social Studies
  Assembly line production
  Industry and Marketing

DESCRIPTION OF ACTIVITY AND ENRICHMENT:

A wooden cube is the holder for a straw flower arrangement. This decorative flower cube will be mass produced in a classroom factory.

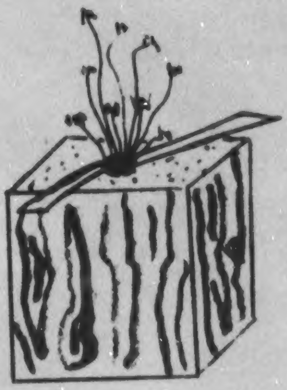
RELATED CAREERS:

Industrial Designer, Interior Decorator, Machine Operator, Novelty and Gift Clerk, Market Researcher.

REQUIRED FOR THIS ACTIVITY:

The wood should be precut from 2" (3.8 cm thick) wood to 3.8 cm widths. The students will cut the lengths.

Instead of buying straw flowers, wild straw flowers can be dried from a weed in the country that is similar in appearance. After drying, they can be colored by dipping in white vinegar and food coloring. Broomweed - yellow bloo, brush type.



SUPPLIES

2" soft wood cut in 3.8 cm widths
Ribbon, various colors, approximately 7 mm wide; each cube uses 11 cm
Straw flowers - assorted colors
Pencils
Sandpaper
Stain and cleaner
Plastic sheet for staining table
Rags
Marker or stamp for bottom identification
Masking tape
Quart size plastic bags - 1 per cube
Paper cups (7 oz. size) - 1 per cube
Paper for labels
White glue

Jotting Space

EQUIPMENT:

Centimeter rules (6)
Scissors (2)
Try-squares (2)
Miter boxes (2)
C-clamps
Cross-cut saws (2)
Drill bit - 3 mm
Hand or electric drill
Rubber or plastic gloves
Brush for stain
Straight edge
Hammers
Punch or large nail
Vise or drill press
Typewriter
Bag sealer (opt.)
Stapler
Paper cutter or scissors
Wooden clamps (2)

ACTIVITY PROCEDURES:

1. Show the flower cube. It's a decorative item. *Name some items in our classroom and homes that are used just for decoration. Why do we need decorative things? How are they produced?*

   Point out that some of the products we buy may be handmade while others are mass-produced in large quantities.

2. Set up a classroom factory to produce the flower cube. Discuss what identification could be used for the company, and a company name. (The bottom of the cube will be marked with initials or symbol and a tag for the bag is typed with the company name and product name.)

3. Use Parent Letter (page 6) for parental permission to work with tools.

4. Use Want Ad (page 7) on bulletin board in advance of activity.

5. "Hire" workers using occupational titles and Production Flow Sheet (page 8).

6. Use Work Station Sheets (pages 9 to 23) to set up factory. Laminate Work Sheets and use masking tape to fasten to Work Stations table tops.

7. Identify the equipment, materials, and safety rules that the class will be using.

8. Conduct on-the-job training. While waiting for training, before needed on the job or after job is completed, students could work on selected career awareness reading and/or career activity sheets.

9. Production will soon be in full operation.

10. After all the employees are "laid off," have oral feed-back from students on feelings, questions, observations, etc., related to assembly line work. *Why is assembly line production used in factories?*

11 Hand out Parent Letter #2 (page 24) to explain activity and enrichment.

PLEASE RECORD ALL BRAINSTORMS.

FOLLOW UP IDEAS:

Use local newspaper want ads to make a survey of job titles in industries that uses assembly line production and items produced by assembly line. To determine if a local company uses assembly line and what products are manufactured, have a student make a phone call to inquire explaining the purpose for the survey.

Find the cost for materials per flower cube. What other expenses would a manufacturer have to figure in the cost? Discuss economic terms such as profit, wages, expenses, assets, etc.

Design an ad to sell the flower cube.

Give students 5 different centimeter lengths and have them create a picture from these measurements. All straight lines should be one of these lengths. All lengths should be used at least once.

Arrange for a field trip to an industry that uses assembly line production.

Invite a resource person from any related careers area to tell about their job. Relate this to the flower cube made in class.

Have each student pick out an adult character in a library book they are currently reading. What is the career title of their job? Give the job description, tools of the trade, and skills needed. Draw a picture of how they might look on the job.

From a brainstorming session, make a list of as many items as possible that are cube shape or uses a cube somewhere in design. Later, use magazines and catalogs for ideas in adding to the list.

EVALUATION:

Have each student fill out the sheet, My Factory Job (page 25). This is not to be checked for wrong answers. It is a check-up on awareness and increased knowledge.

HEALTH AND SAFETY PROCEDURES:

1. Place the sanding and staining work stations apart, but both need ventilation.
2. Make sure every student has permission from home to work with tools.
3. Always wear safety glasses when using power or hand tools.
4. Be sure the miter boxes are clamped tightly to the table top.
5. Beware of saw teeth. They are sharp. Keep hands off cutting edges. Watch thumb location on the miter box while sawing.
6. Explain and demonstrate the use of stain. Be sure all rags are placed in a tight container after using.
7. Sawing slowly with long, steady strokes provides an easier cut.
8. Handle scissors as a sharp tool.
9. Disconnect the plug before changing bit in the electric drill. Tighten chuck securely on drill before operating.
10. Each worker should stay at assigned work station during production.
11. Younger students should be instructed to saw with both hands on the saw handle. Fingers are kept out of the way of saw teeth and it is easier to saw.

TIPS TO THE TEACHER:

1. Before production starts, decide upon a method to use in marking the bottoms of the cubes. This can be by metal stamps, markers, or engraver.
2. Encourage accuracy in measuring, cutting, and drilling. Relate to products purchased that don't "fit."
3. Tell students that in marking the boards, make fine lines with a sharp pencil. The 2 mm lines are for saw waste.
4. Discuss in class how to find the center of a square or rectangle by drawing two lines diagonally from corner to corner.
5. Mark drill bit with masking tape to assure correct depth of holes.
6. Some of the students may have small amounts of leftover stain at home that could be used.
7. Use masking tape to fasten the sandpaper sheet to the table.

Dear Parent:

As part of our ABC/EE program your child will have the opportunity to participate in hands-on projects in Language Arts, Math, Social Studies, and Science. Your child may be working with basic hand tools, small electrical appliances and tools, wood burners, carving tools, and/or sewing machines.

We will demonstrate equipment and take all precautions for their safety. You may also help by talking with your child about safety in use of tools.

In order for us to have an awareness that you do have a knowledge of your child's activities, we must have your consent before allowing your child to use any equipment.

The attached permission slip must be signed in order for your child to participate in our activities.

You are welcome to visit our classroom at any time during ABC/EE activities. Please feel free to ask any questions concerning this program.

I give my permission for ______________________________ to use the equipment and tools in the classroom ABC/EE activities.

____
(Parent or Guardian)

____
(Date)

HELP WANTED

____
(Company Name)

HAS THESE IMMEDIATE OPENINGS

* SHOP FOREMAN
* CUTTERS
* ASSEMBLERS
* LAYOUT WORKERS
* DRILL OPERATORS
* SANDERS
* FINISHERS
* STAMPERS
* SAFETY ENGINEER AND INSPECTOR
* TYPIST
* PACKAGERS

EXCELLENT BENEFITS

Experience needed: ____________________ Grade

Apply in Room ____________ Monday through Friday.

FACTORY PRODUCTION FLOW

Suggested Number of Employees	Work Stations
1 Shop Foreman	--
1 Cutter	1
2 Cutters	2
1 Assembler	3
2 Layout Workers	4
4 Cutters	5
2 Layout Workers	6
2 Drill Operators	7
2 Sanders	8
2 Finishers	9
2 Stampers	10
1 Assembler	11
1 Safety Engineer and Inspector	12
2 Typists and Cutter	13
2 Packagers	14

155

SHOP FOREMEN

1. KNOW EACH JOB IN YOUR FACTORY AND MAKE SURE EACH FACTORY WORKER IS DOING THE JOB CORRECTLY.
2. KNOW THE FLOW OF PRODUCTION AND BE ABLE TO ANSWER QUESTIONS THE WORKERS MAY HAVE.
3. FILL IN AT ANY STATION IN CASE OF AN ABSENCE.
4. IF YOU SEE A SAFETY VIOLATION, CALL THE SAFETY ENGINEER.
5. MAKE SURE SUPPLIES ARE PLENTIFUL AT EACH STATION.

CUTTER
STATION #1

1. CUT RIBBON 11 CM LONG ON 45° ANGLE.
2. PASS CUT RIBBONS TO STATION #3.

Needed from tool crib:
- ribbon
- centimeter ruler
- scissors

CUTTER

STATION #2

1. SORT FLOWERS INTO THREE GROUPS OF ASSORTED COLORS. HANDLE CAREFULLY.
2. CUT ONE GROUP OF FLOWERS 8 CM LONG.
3. CUT ONE GROUP OF FLOWERS 6.5 CM LONG.
4. CUT ONE GROUP OF FLOWERS 5 CM LONG.
5. PASS 12 FLOWERS OF ASSORTED LENGTH AND COLORS TO STATION #3.

Needed from tool crib:
  straw flowers
  centimeter ruler
  scissors

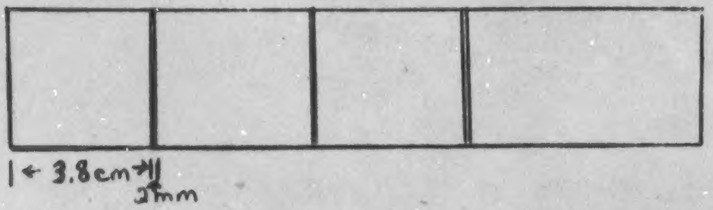
ASSEMBLER
STATION #3

1. ARRANGE FLOWERS.
2. TIE RIBBON IN SIMPLE KNOT AROUND FLOWER STEMS.
3. TAKE TO WORK STATION # 11.

LAYOUT WORKER
STATION #4

1. MEASURE AND MARK BOARDS AT 3.8 CM.

   MAKE A LINE WITH A TRY-SQUARE.



2. MARK 2 MM FOR SAW WASTE.
3. REPEAT 2 AND 3 THE FULL LENGTH OF BOARD.
4. PASS MARKED BOARDS TO STATION # 5.

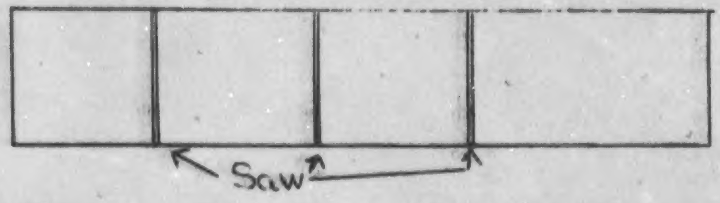
Needed from tool crib:
  2" wood cut in 3.8 cm widths
  centimeter rulers
  try-square
  pencil

CUTTER

STATION #5

1. PLACE WOOD IN MITER BOX. LINE UP MARKED LINE WITH SAW SLOTS. USE A WOODEN CLAMP TO FASTEN IN PLACE.

2. SAW BETWEEN THE 2 MM LINES.



3. CUT ALL CUBES FULL LENGTH OF BOARD.

4. PASS ALL CUBES TO WORK STATION # 6.

Needed from tool crib:

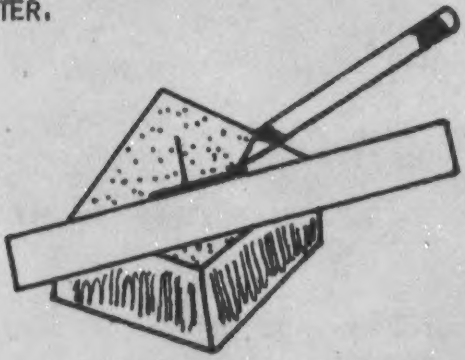
miter box
cross-cut saw
C-clamps
wooden clamps

161

LAYOUT WORKER

STATION #6

1. PLACE CUBE ON TABLE SO GRAIN IS VERTICAL.
2. FIND THE CENTER - TOP OF THE CUBE BY LAYING STRAIGHT EDGE FROM CORNER TO CORNER. MAKE SHORT LINES IN THE CENTER.



3. PUT PUNCH WHERE LINES CROSS AND STRIKE PUNCH WITH HAMMER.
4. PASS PUNCHED CUBE TO STATION # 7.

Needed from tool crib:

  straight edge or ruler
  sharp pencil
  punch or large nail
  hammer

DRILL OPERATOR
STATION #7

1. PLACE CUBE WITH PUNCHED HOLE UP.
2. DRILL A HOLE 2 CM DEEP STARTING IN PUNCHED HOLE.
3. PASS DRILLED CUBES TO WORK STATION # 8.

Needed from tool crib:

drill bit - 3 mm twist
hand or electric drill
vise or drill press

SANDER
STATION #8

1. PLACE ONE SHEET OF SAND PAPER ON BENCH.
2. TO SAND, LAY CUBE FLAT ON SANDPAPER. SAND ALL SIDES SMOOTH.
3. PASS SANDED CUBES TO WORK STATION # 9.

Needed from tool crib:

sandpaper

FINISHER

STATION #9

1. APPLY STAIN AND RUB OFF EXTRA.
2. PASS FINISHED CUBE TO WORK STATION # 10.

Need from tool crib:

rubber or plastic gloves
brush
stain
plastic to cover table
rags

STAMPER

STATION #10

1. PLACE CUBE WITH LARGE DRILLED HOLE DOWN ON BENCH.
2. PUT IDENTIFICATION MARKING ON THE BOTTOM OF THE BLOCK.
3. PASS CUBE TO WORK STATION #11.

Needed from tool crib:

marker

ASSEMBLER
STATION #11

1. PUT ONE DROP OF GLUE IN HOLE OF CUBE.
2. PLACE TIED FLOWERS IN HOLE.
3. PASS COMPLETED FLOWER AND ARRANGEMENT TO WORK STATION #12.

Needed from tool crib:

glue

SAFETY ENGINEER
AND
INSPECTOR
STATION #12

1. MAKE SURE WORKERS ARE WEARING EYE PROTECTION.
2. KEEP WORK STATIONS AS CLEAN AS POSSIBLE. CLEAN UP EXCESSIVE TRASH.
3. CHECK LIGHTING AND VENTILATION.
4. INSPECT THE FLOWER CUBE. IF ANY OPERATION HAS NOT BEEN DONE, RETURN TO THE WORK STATION RESPONSIBLE FOR THAT OPERATION.
5. PASS THE FLOWER CUBES THAT PASSED INSPECTION TO WORK STATION # 14.

TYPIST AND CUTTER
STATION #13

1. SET LEFT MARGIN OF TYPEWRITER AT 30.
2. START 10 SPACES FROM TOP OF PAPER.
3. TYPE COMPANY NAME IN CAPITAL LETTERS.
4. GO DOWN 10 SPACES TO TYPE COMPANY NAME AGAIN.
5. REPEAT SPACING AND TYPING ON WHOLE SHEET.
6. CUT PAPER CROSSWISE BETWEEN TYPING.
7. PASS LABEL PIECES TO STATION #14.

Needed from tool crib:

typewriter
paper cutter or scissors
typing paper

PACKAGER

STATION #14

1. PRESS A FLOWER CUBE DOWN INTO A CUP UNTIL IT IS HELD STEADY.
2. PLACE CUP DOWN INTO PLASTIC BAG.
3. SEAL OR STAPLE BAG CLOSED, LEAVING SPACE AT TOP OF BAG TO STAPLE LABEL.
4. STAPLE ON LABEL.

Needed from tool crib:

plastic bags
paper cups
stapler
bag sealer (opt.)

Dear Parent:

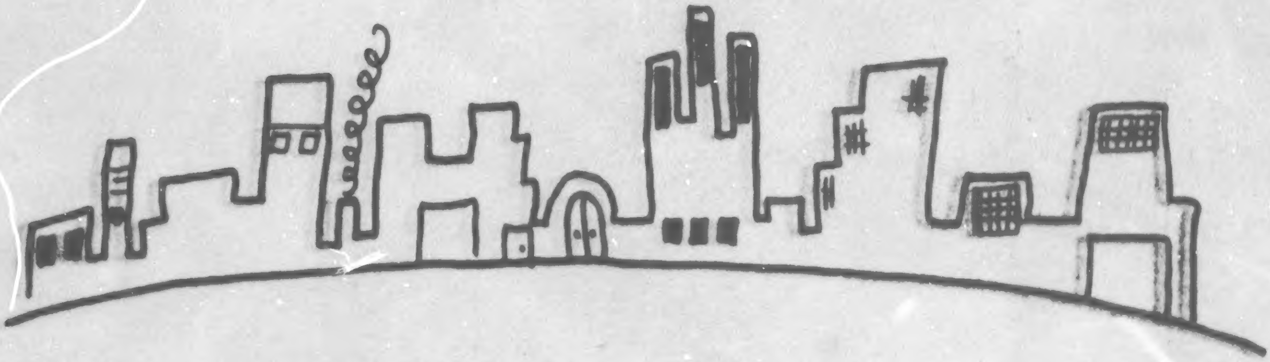
As an activity for social studies, math, and art, our classroom factory mass-produced flower cubes.

Assembly line workers are important in our modern world. Look around you in your home to see the number of products you use that are the result of mass production. A game to play with your child to identify these items begins: *I see something made in a factory, beginning with the letter* "T." *What is it?* Take turns guessing, stopping the game before it starts to be tiring to the child.

Another fun family activity is to set up a mini-assembly line for a food or handicraft.

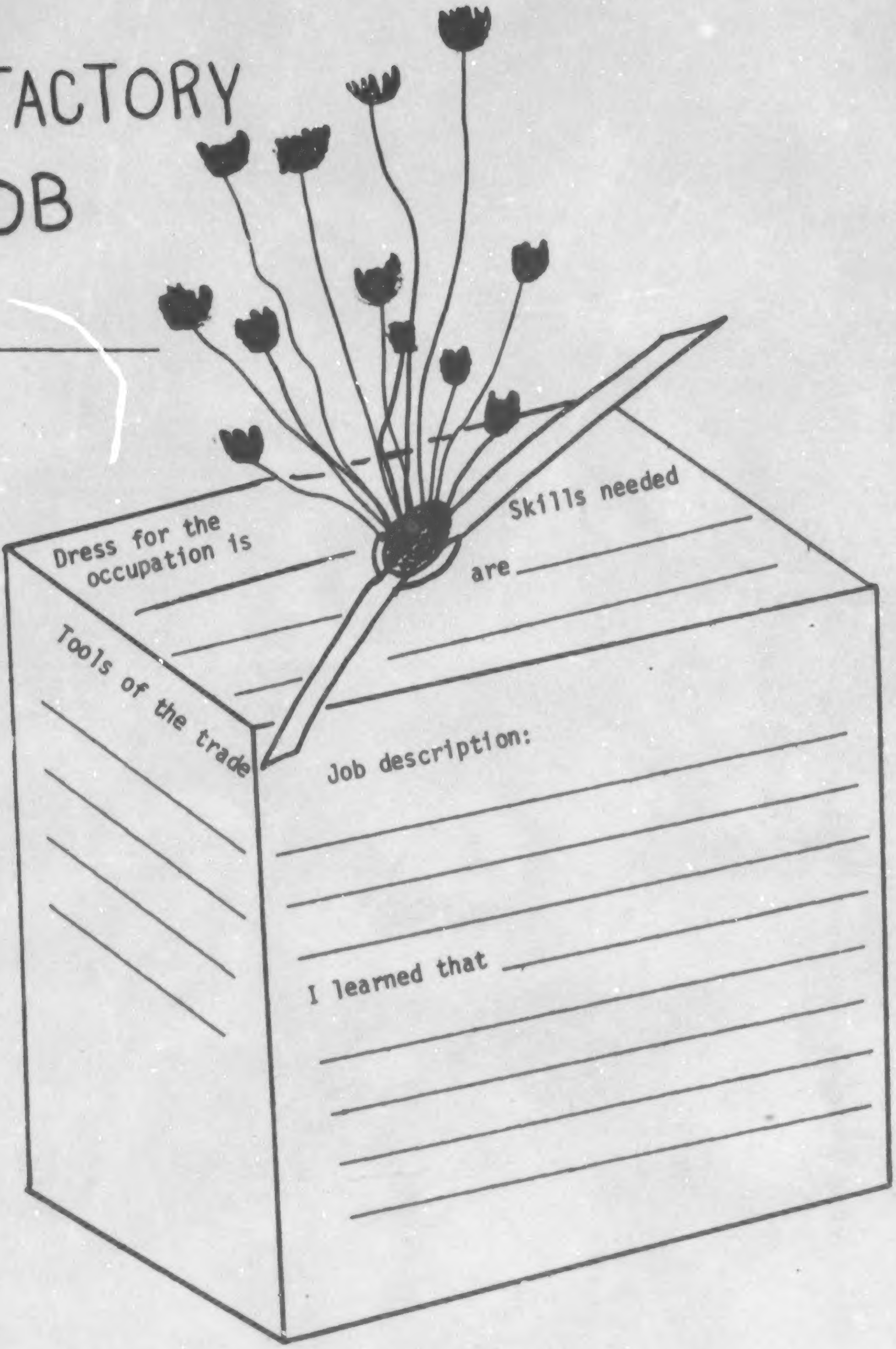
If you work on or near an assembly line, tell your child about some of the jobs, describe what is being made, and relay other job information of interest during family conversations.

Thank you for your interest in your child's classroom work.



MY FACTORY JOB

TITLE____________________



Dress for the occupation is ____________

Skills needed are ____________

Tools of the trade

Job description: ____________

I learned that ____________

RESOURCE SHEET

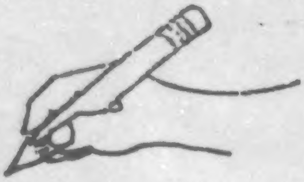
FOR THE TEACHER

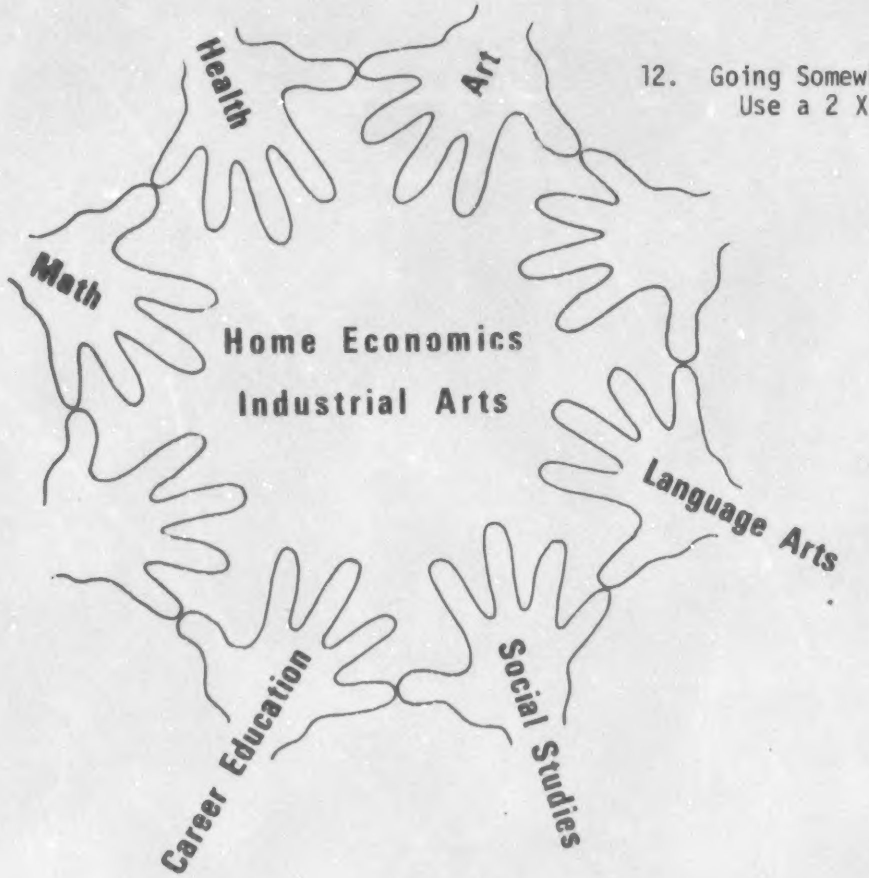
Daniels, Becky. "The Paper Airplane Factory," The Good Apple Newspaper. March, 1978, Section 1.

Farnetta, Cherrie, Imogene Forte, and Barbara Loss. At Least A Thousand Things To Do, A Career-Awareness Activity Book. Nashville, TN: Incentive Publications, 1977.

McDonald's Corporation. Economics Action Pack, The Wonderful Treasure Tree. Oak Brook, IL: McDonald's Corporation, 1976.

Sheperak, Rita and Jerry Debruin. Touching and Teaching Metrics. Carthage, IL: Good Apple, Inc., 1977. (Box 299)




Health
Art
Math
Home Economics
Industrial Arts
Language Arts
Social Studies
Career Education

12. Going Somewhere? Use a 2 X 4 Vehicle!

Hands-on Approach

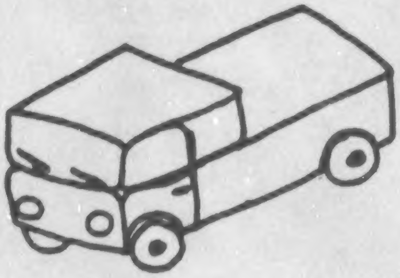
wichita public schools
wichita, kansas

Activity Based Curriculum for Elementary Education

ACTIVITY TITLE:

Going Somewhere? Use a 2 x 4 Vehicle!

AREA TITLES AND MAJOR CONCEPTS:



Art
  Observing details of real-life
  Creative expression
  Shapes - line, form

Health
  Safety with tools

Language Arts
  Vocabulary
  Oral language developed
  Following directions

Math
  Geometry - shapes
  Proportions

Social Studies
  Transportation - today's world
  Careers in transportation
  Decision making

DESCRIPTION OF ACTIVITY AND ENRICHMENT:

Each student will construct a 2 x 4 vehicle for a classroom transportation unit. The vehicles are made from two pieces of scrap 2 x 4 boards--glued together, painted for details, and wheels nailed on.

RELATED CAREERS:

Bus Driver, Conductor, Mechanic, Taxi Driver, Truck Driver, Ticket Agent, Pilot

REQUIRED FOR THIS ACTIVITY:

The 2 x 4 pieces are to be precut in various lengths from 6 cm to 18 cm. A center hole in the plastic jug lids is drilled by the teacher for wheels.

SUPPLIES:

- 2 x 4 scraps - 6 cm to 18 cm lengths of wood
  - Each child needs 2 pieces - A *large selection allows a choice of type of vehicle*
- White glue
- Plastic jug lids - 4 per vehicle
- Nails - short with big heads
- Paint - leftover latex in a variety of colors
- Sandpaper
- Masking tape
- Paper or plastic to cover the paint table

EQUIPMENT:

- Paint brushes
- Hammers
- Vises

ACTIVITY PROCEDURES:

1. Conduct a transportation survey. *How many things can you name that we could ride in to take a trip?* Make a list of the answers, even ones like jeep,racer,etc.

2. Allow some time for students (in small groups) to visit the "wood block" center. The blocks are the 2 x 4's that will be used later for the activity. Direct them to lay blocks on top of one another, naming the vehicle it might be.

3. Send home Parent Letter (page 5) for permission to work with tools and to ask for jug lids and paint.

4. Each student selects one land vehicle to make and plans the wood blocks they need. Encourage imagination. Have them pick out two blocks (2 x 4 boards, cut in various lengths up to 18 cm). Lay the bottom piece flat on the table. Decide upon top piece location and spread glue over the bottom. Press the two pieces together and let dry.

5. To allow glue to dry, the vehicles are sanded and painted the following day(s).

6. Discuss safety in using the hammer and nails (page 4). Role-play carrying a hammer.

7. After the paint is dry, have the students nail on wheels. (The holes in the lids should be drilled by the teacher.) Secure the vehicles in a vise for nailing.

8. Add final details to vehicles.

9. Have a 2 x 4 vehicle show. Invite parents and other guests. Have each child write their invitation on paper in the shape of their vehicle.

10. Continue transportation studies.

FOLLOW UP IDEAS:

On a classroom chart, write *Career ABC's*. Have students give at least one occupation for each letter of the alphabet. Try to have each occupation related to transportation or a worker that uses transportation in their job. Example:

A is for *astronaut*.
B is for *bus driver*.
C is for *car wash worker*.
D is for *designer*.
E is for *electric line repairman*.
F is for *fire truck driver*.

It may take several sessions to get an occupation for all the letters.

Take a field trip to an airport, bus terminal, trucking lines, or car dealer. Notice the number of different jobs.

Find and read library storybooks related to transportation.

Have each student learn to spell the name of the vehicle they constructed in class.

Measure the finished vehicles in centimeters.

Name the geometric shapes seen in each vehicle the students made.

Have each students copy a license tag and bring to class. *Which has the highest number? Are there any out-of-state tags?* Note any thing of interest.

Experiment to see how their vehicles run on different types of surfaces, such as lawn, sand, and pavement. *Why is there a difference?*

Develop a reading word list from vehicle parts such as wheel, window, headlight, etc.

Make airplane hangers with tagboard rectanges curved into a dome and taped to cardboard. Write a different number on each hanger. The child works out addition problems on wings of airplances and taxi's into appropriate hangers.

EVALUATION:

During the classroom show of finished vehicles, have each student tell the class about the kind of vehicle they made and special features it has. The vehicles do not have to be a copy of a real-life vehicle.

HEALTH AND SAFETY PROCEDURES:

1. Always wear safety glasses when using power or hand tools.
2. Keep nails out of your mouth.
3. Place the sanding table near ventilation.
4. Swinging a hammer carelessly could hurt someone close by.
5. Keep nails and other supplies picked up off the floor.
6. Make sure every student has permission from home to work with tools.
7. Emphasize that tools are not toys. Tools are safe when handled correctly, bur are dangerous when handled carelessly.
8. Use a water base, nonlead paint, such as household latex paint. Tempera paint would rub off on hands when vehicles were pushed.

TIPS TO THE TEACHER:

1. Tape sandpaper sheets to the work table with masking tape.
2. Ask a parent volunteer to work in the class during the activity. Instruct them to give directions and encouragement, enforce safety actions, and help the child that is having difficulty without doing the work for them.
3. A jig would be helpful in marking the center of the lids for drilling the hole. Drill the hole with same size nail as being used.
4. Scraps of 2 x 4 boards should be available at many building sites.
5. After sanding the ends smooth, the edges can be slightly beveled by holding the wood at an angle to the sandpaper.
6. Encourage each student to use their imagination on selecting a vehicle to construct.
7. Demonstrate to students how to paint and dip brush in paint. It will help in painting if a paper sketch of their vehicle is colored with crayons before going to the paint center.

Dear Parent:

In class, we are studying transportation; combining social studies and language arts. One activity planned is to construct some wooden vehicles.

We need a lot of plastic milk jug lids and some "leftover" indoor latex paint for these vehicles.

This activity will require the use of a hammer, sandpaper, and nails. Safety will be stressed. By safety being emphasized at home also, it can become a good habit.

Thank you for helping us with supplies for this activity. Please send back to school the permission slip below.

The field of transportation is very important in our modern world. New words will be introduced in class while making the vehicles. We will be talking about jobs in transportation. At home, tell about your job and how it involves transportation.

I give my permission for ________________________________ to use the tools in the classroom of ABC/EE activities.

____
(Parent or Guardian)

____
(Date)

RESOURCE SHEET

FOR THE TEACHER:

Adams, Ruth. Woodworking in Kindergarten. Minneapolis: T.S. Dennison and Co., Inc., 1967.

Lorton, Mary Baratta. Workjobs Activity, Centered Learning For Early Childhood Education. Rolling Meadows, IL: Addison-Wesley Publishing Co., 1972. (1843 Hicks Rd.)

Trucks and Things You'll Want To Know About Them. Washington, DC: American Trucking Associations. (Educational Services Public Relations, Dept. 1616 P Street, N.W.)
Free booklet for grade levels 3-6.

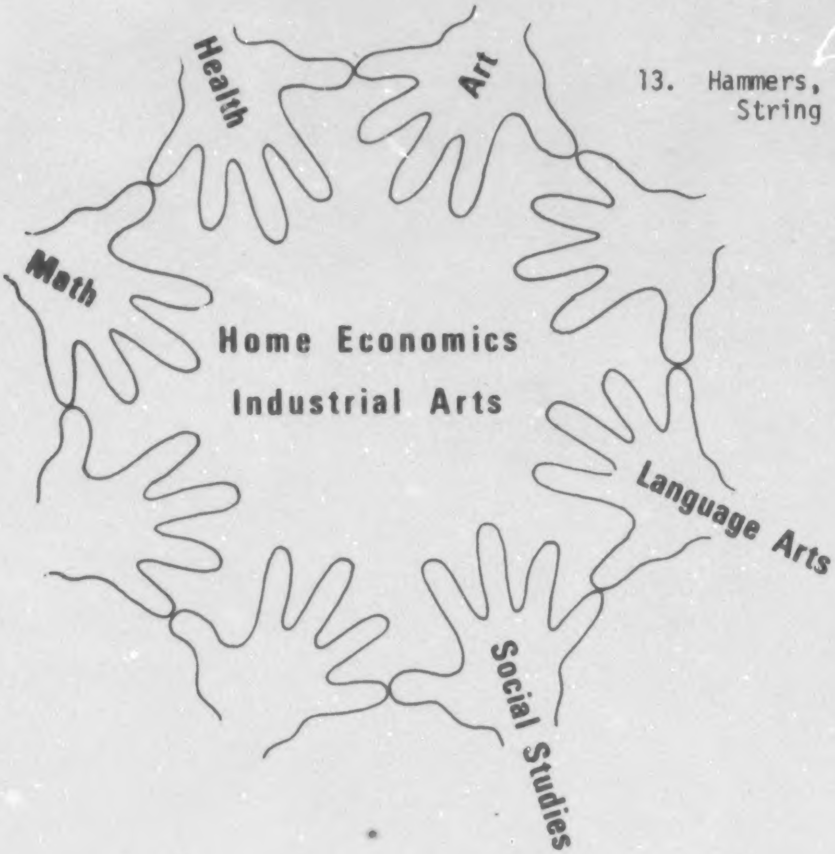
JOT IT DOWN!

FOR THE STUDENT:

I Want To Be - Career Awareness Series. Chicago: Children's Press.
- I Want To Be A Truck Driver
- I Want To Be A Forester
- I Want To Be A Taxi Driver
- I Want To Be An Airplane Hostess
- I Want To Be A Bus Driver
- I Want To Be A Carpenter

The Little Carpenter. New Britain, CN: Stanley Tools, 1969.

13. Hammers, Nails, and Wood - String A Design


Health
Art
Math
Home Economics
Industrial Arts
Language Arts
Social Studies

Hands-on Approach

wichita public schools
wichita, kansas

Activity Based Curriculum for Elementary Education

ACTIVITY BASED CURRICULUM FOR ELEMENTARY EDUCATION

ACTIVITY TITLE:

Hammers, Nails, and Wood - String A Design

AREA TITLES AND MAJOR CONCEPTS:

Art
  Creative expression
  Designs
  Colors

Health
  Personal safety - tools

Social Studies
  Community workers
  Social development

Language Arts
  Oral language development
  Reading readiness - eye-hand coordination

Math
  Geometry - shapes
  Counting numbers
  Metric linear measurement

DESCRIPTION OF ACTIVITY AND ENRICHMENT:

Each student will hammer nails into a rectangle or square piece of wood in random form or a design. Yarn is wound in and out of the nails to create a design.

RELATED CAREERS:

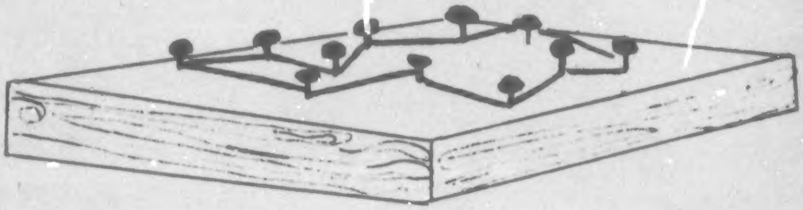
Carpenter, Forester, Horticulturist, Lumber Yard Clerk, Hammersmith.

SUPPLIES:

Softwood - scraps cut in squares or rectangles
Nails
Yarn, String, or Heavy Duty Thread - assorted colors and sizes
Pencils
White glue
Sandpaper
Masking tape
Pop can tabs for hangers

EQUIPMENT:

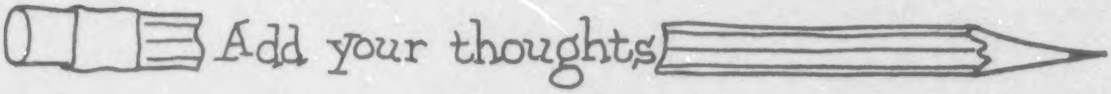
Hammers
If students measure wood piece:
  Try-squares
  Saw
  Miter box or sawing jig
  C-clamps
  Centimeter rulers
  Wooden clamp



182

ACTIVITY PROCEDURES:

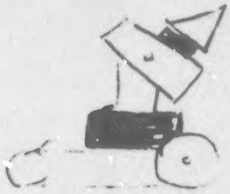
1. Introduce the activity. Name the tools and supplies that will be used. Role play how the tools should be carried for safety. Discuss what could happen if handled improperly.
2. Send home Parent Letter (page 7) for permission to work with the tools.
3. Older students will start drawing the designs. Younger students will have practice sessions hammering nails in scrap wood.
4. Each student makes a string design on a square or rectangle piece of wood.
    a. The young child will hammer in nails at random and wind with yarn.
    b. Use the Student Activity Sheet (page 8) for students drawing a design.
5. Talk to each student about their design, saying: *Tell me about what you made.* They should not be made to feel that it has to be an object that can be identified. It can just be a pretty shape.
6. Send home Parent Letter #2 (page 9) to explain the activity and enrichment.

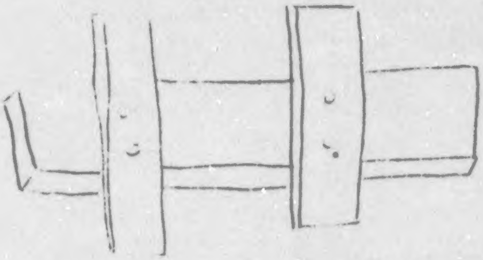


FOLLOW UP IDEAS:

Plan a field trip to a house in the construction stage to see the work of a carpenter.

Have students make "creations" from wood scraps, hammer, nails, bottle and jug caps, glue, etc. For example, an engine can be made from a block of wood and nails for spark plugs. You may wish to include a hand drill and miter box saw in equipment to use for creations. The creations will be crude to you but special to the child. Encourage each child to use their imagination in building their creation. These could even be painted with leftover household latex paint.





Have a gallery showing of string designs for parents and friends. Make the times open for the showing, flexible to allow more parents the opportunity to come.

Visit an art exhibit to explore designs and shapes used.

Display four tools, such as hammer, pliers, saw, and screwdriver. Ask four children to tape record the description of one tool without naming it. Have a group listen to the tape and match tools with descriptions. Ask questions such as: *What can you make with this? How do you carry this tool?*

PLEASE RECORD ALL BRAINSTORMS.

EVALUATION:

To evaluate the effectiveness of this activity, use the following form as a sample. Fill in concepts you desire to achieve.

STUDENT'S NAME	VERBALLY DESCRIBED PROJECT TO ME	PROGRESSED IN EYE-HAND COORDINATION	FOLLOWED SAFETY RULES	CREATIVE--DID NOT HAVE TO BE LIKE OTHERS	

HEALTH AND SAFETY PROCEDURES:

1. Keep nails out of your mouth.
2. Swinging a hammer carelessly could hurt someone close by.
3. Always wear safety glasses when using tools.
4. Keep nails picked up off the floor.
5. Beware of saw teeth. They are sharp. Keep hands off cutting edges. If younger children are sawing, keep both hands on the saw handle. Clamp the piece of wood to be cut in the miter box.
6. Tools are not toys. Tools are safe when handled correctly but are dangerous when handled carelessly.
7. Place the sanding table near ventilation.
8. Be sure every student has permission from home to work with tools.

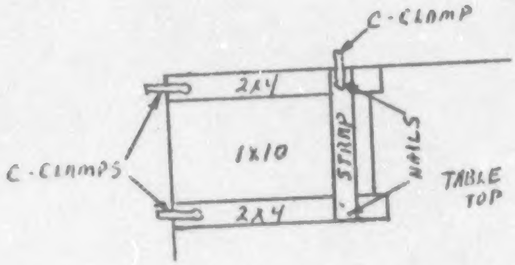
TIPS TO THE TEACHERS:

1. Clamp the wood into the miter box or sawing jig to make the sawing easier.
2. Tape the sandpaper to the table top for sanding the edges of the boards.
3. Conduct a session for young children in advance of the activity, allowing them just to hammer nails in wood scraps.
4. Parent volunteers could be asked to aid during the activity. They should be instructed to give directions, enforce safety rules, and help the child that is having difficulty without doing the hammering for them.
5. To start yarn or string, tie to a nail and clip end. When finished, glue the end of the yarn pressing against another piece of yarn and holding for a minute.
6. For young children that hammer nails randomly, use big-headed nails. Use finish nails or brads for students that are drawing a design on paper and have nails 1 cm apart.
7. If using a pop can tab for a hanger, make a starter hole for the nail in the solid lower part of the tab. Hammer the large nail just until it breaks the surface of the metal. Place the top edge of the ring even with the top back edge of the wood. Center the tab between side edges. Place a small nail in the starter hole and hammer in.

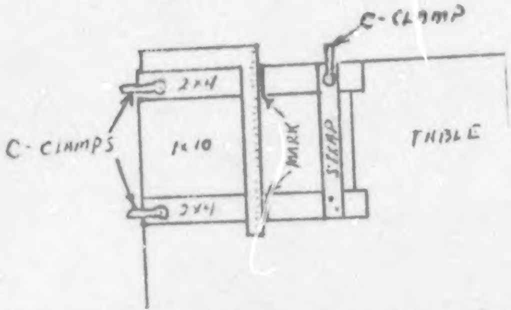
TIPS TO THE TEACHER Continued

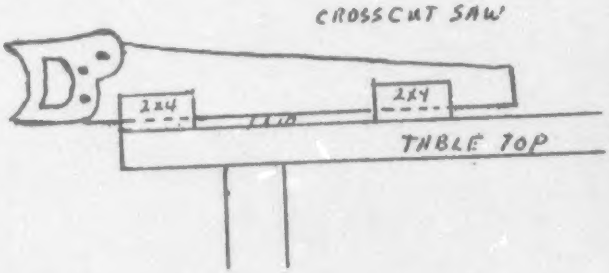
Make sawing jigs for boards too wide for miter box.

a. Toward the edge of the table clamp two 2 x 4 boards on each side of a 1 x 10 board. Nail a wooded strap across the loose ends of the 2 x 4 boards. Clamp the strap to the edge of the table.

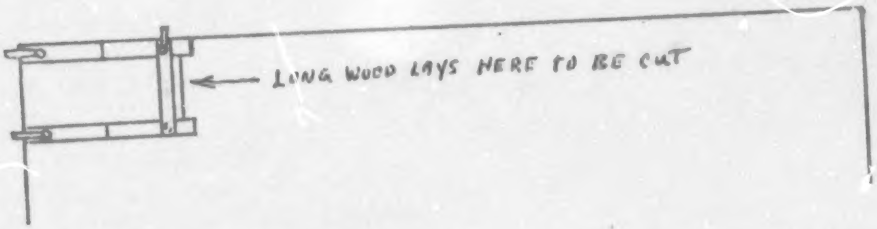

C-CLAMP
2x4
1x10
STRAP
NAILS
C-CLAMPS
2x4
TABLE TOP

b. Lay a framing square across both 2 x 4 boards and mark. Select a cross cut saw and cut both 2 x 4 boards, on the lines at the same time, Miter-box style. Stop sawing when saw scratches the 1 x 10 board. KEEP SAW FLAT.


C-CLAMP
2x4
C-CLAMPS
1x10
MARK
STRAP
TABLE
2x4


CROSSCUT SAW
2x4
2x4
TABLE TOP

c. To cut boards slip a long piece of wood in back of jig until cut line is directly under saw blade. Keep saw flat while sawing.


LONG WOOD LAYS HERE TO BE CUT

Dear Parent:

As part of our ABC/EE program your child will have the opportunity to participate in hands-on projects in Language Arts, Math, Social Studies, and Science. Your child may be working with basic hand tools, small electrical appliances and tools, wood burners, carving tools, and/or sewing machines.

We will demonstrate equipment and take all precautions for their safety. You may also help by talking with your child about safety in use of tools.

In order for us to have an awareness that you do have a knowledge of your child's activities, we must have your consent before allowing your child to use any equipment.

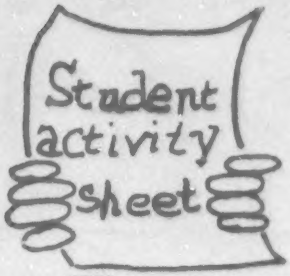
The attached permission slip must be signed in order for your child to participate in our activities.

You are welcome to visit our classroom at any time during ABC/EE activities. Please feel free to ask any questions concerning this program.

I give my permission for ______________________________ to use the equipment and tools in the classroom ABC/EE activities.

____
(Parent or Guardian)

____
(Date)



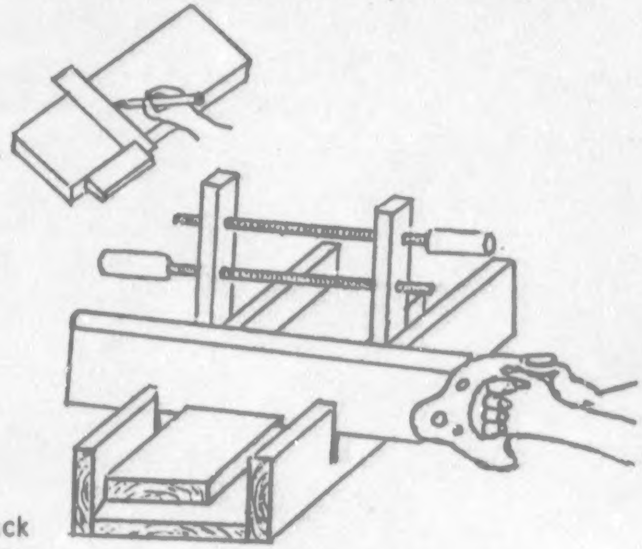
STRING A DESIGN

☐ 1. Make some sketches or objects you like or just draw interesting designs. Pick your favorite drawing.

☐ 2. Mark all the outlines on your drawing with a colored pencil or marker.

☐ 3. With a different color, put small dots on the outlines to mark the locations for nails to make a string hanging. Make each mark 1 cm apart.

☐ 4. Mark a board so it is at least 2 cm wider and 2 cm longer than your paper design. Use a try-square to mark the sawing lines. Clamp the wood in a miter box and saw. Turn and saw the width.



☐ 5. Write your name on the back of your board.

☐ 6. Sand the edges smooth.

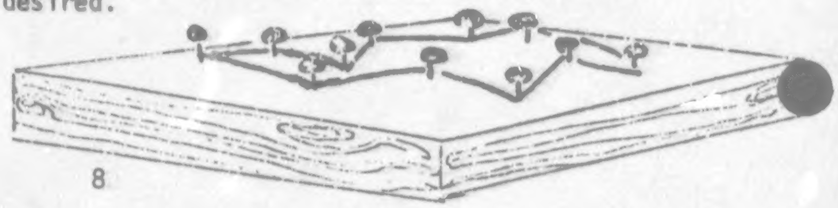
☐ 7. Nail a pop can tab at the top back center of your piece for a hanger.

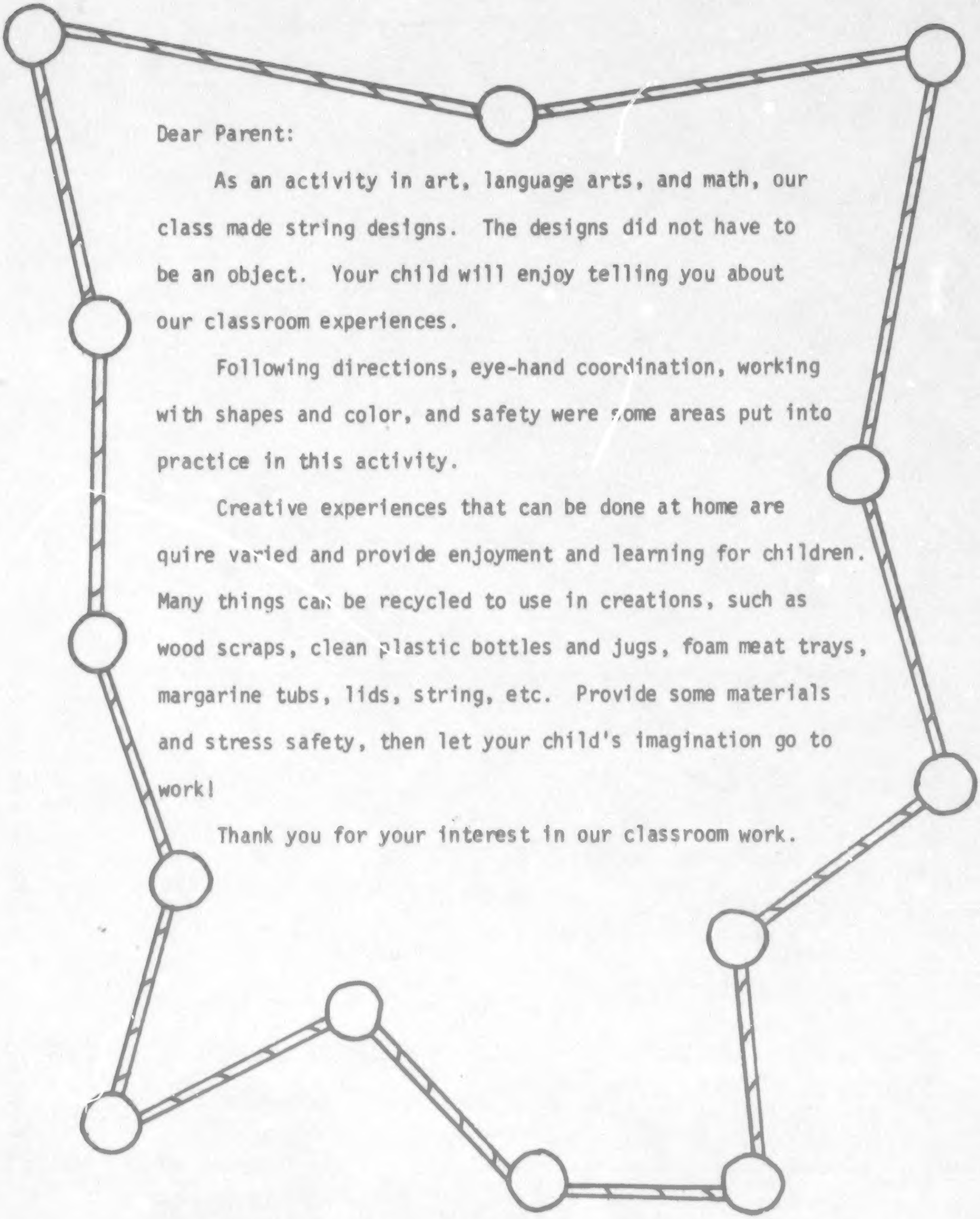
☐ 8. Center your drawing on the front of your board and tape down.

☐ 9. Hammer in nails at the dots 1 cm apart. to form the outlines of your design.

☐ 10. Tear off the paper pattern.

☐ 11. Wind with string or yarn to form the design. Detail can be added over the background yarn, if desired.





Dear Parent:

As an activity in art, language arts, and math, our class made string designs. The designs did not have to be an object. Your child will enjoy telling you about our classroom experiences.

Following directions, eye-hand coordination, working with shapes and color, and safety were some areas put into practice in this activity.

Creative experiences that can be done at home are quire varied and provide enjoyment and learning for children. Many things can be recycled to use in creations, such as wood scraps, clean plastic bottles and jugs, foam meat trays, margarine tubs, lids, string, etc. Provide some materials and stress safety, then let your child's imagination go to work!

Thank you for your interest in our classroom work.

RESOURCE SHEET

FOR THE TEACHER:

Adams, Ruth J. Creative Woodworking In Kindergarten. Minneapolis: T.S. Denison and Co., Inc., 1967.

Sheperak, Rita and Jerry DeBruin. Touching and Teaching Metrics. Carthage, IL: Good Apple, Inc., 1977. (Box 299)

FOR THE STUDENT:

Baker, Eugene. I Want To Be An Architect. Chicago: Children's Press, 1969.

Greene, Carla. I Want To Be A Carpenter. Chicago: Children's Press, 1959.

The Little Carpenter. New Britain, CN: Stanley Tools, 1969.

Jotting Space

14. Hanging Plant Holder Factory

Math
Science
Home Economics
Industrial Arts
Language Arts
Career Education
Social Studies

Hands-on Approach

wichita public schools
wichita, kansas

Activity Based Curriculum for Elementary Education

ACTIVITY BASED CURRICULUM FOR ELEMENTARY EDUCATION

ACTIVITY TITLE:

Hanging Plant Holder Factory

AREA TITLE AND MAJOR CONCEPTS:

Language Arts
  Vocabulary - industrial
  Advertisement

Math
  Metric linear measurement

Science
  Plant life

Social Studies
  Assembly line production
  Factories - industry
  Economics

DESCRIPTION OF ACTIVITY AND ENRICHMENT:

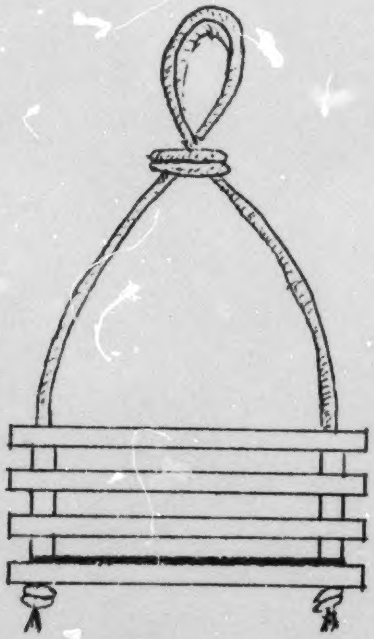
Wooden hanging plant holders will be mass produced in two classroom factories. Factory number 1 is the production plant and factory number 2 is the assembly plant. The wooden strips are measured, sawed, and drilled before stringing together.

RELATED CAREERS:

Horticulturist, Lumber Yard Clerk, Industrial Designer, Machine Operator, Engineer, Florist.

REQUIRED FOR THIS ACTIVITY:

The planter in this activity is made from wood and rope. The wood for the sides should be precut 2.5 cm wide. The thin wood used for the bottom should be precut 19 cm wide. The students will measure and cut lengths.



SUPPLIES:

- Sand paper
- Masking tape
- Wooden sides (softwood 2.5 cm x 2 cm) each planter needs 14 pieces cut 25.5 cm long
- Wooden bottom (thin plywood, masonite, or paneling) cut 19 cm wide
- Rope or jute - 2 m long (2 per planter)
- Paper for tags
- Paper bags such as grocery sacks

EQUIPMENT AND TOOLS:

- Centimeter rulers
- Hand saws
- Miter box
- Drill bit 1/4 inch (6 mm) one for each drill
- Try squares (4 or more)
- Scissors
- Stapler
- Meter stick
- Sanding blocks and thumb tacks
- Broom, brush, and dust pan
- Eye goggles
- Typewriter (opt.)
- Hand drill or electric drill (2)
- Drill press or vise
- Sawing jig for bottoms (page 7)

JOT IT DOWN!

ACTIVITY PROCEDURES:

1. Introduce the product needed--a hanging plant holder. (It would be best to have one made to show the class). *"What would be the quickest way to make 1000 of these?" "Why is assembly-line production faster?"*

2. After a brain storming session, have class members vote on a company name.

3. Use Parent Letter (page 8) for parental permission to work with tools.

4. The production factory, Plant #1, will need full employment before beginning Plant #2, the assembly factory. Use Work Station Sheets (page 10 to 27) to set up factories. Laminate Work Sheets and tape to Work Stations in the factory. Make sawing jig (page 7).

5. "Hire" workers using occupational titles on Work Stations Sheets. If two workers are at each Plant #1 Work Station, some can later be transferred to assembly in Plant #2.

6. Identify the equipment, materials, and safety rules that the class will be using.

7. Conduct on-the-job training, beginning with Work Station #1. While waiting for training the students could be working on selected career awareness reading and career activity sheets or cards. (See page 30).

8. Production should soon be in full operation.

9. During a break or after production is finished, have oral feed-back from students on feelings, questions, observations, etc. related to factory work. *"What are some of the problems in factories today?"*

10. Hand out Parent Letter II (page 28).

FOLLOW UP IDEAS:

Have students survey the want-ads in the newspaper to make a listing of job titles in industry.

Title a bulletin board "What Are Employers Looking For?" Have students draw large character eyes and write a characteristic of a good employee to put on the bulletin board.

Plan a field trip to a factory to see an assembly line production.

Invite parents to talk to the class about their job in a factory or industry.

Make a classroom collage to show the products resulting from manufacturing. Cut out pictures and/or use student drawings.

Take an anonymous survey of parents' jobs. Make a bar graph to illustrate the number in two classifications: (1) producers of goods and (2) producers of services. Which workers are more important in our modern world? Conduct a debate with one-half the class on each side of the issue.

EVALUATION:

Use "My Factory Experiences" sheet (page 29). This is not to be checked for wrong answers, but is a check-up on awareness and increased knowledge.

HEALTH AND SAFETY PROCEDURES:

1. Always wear safety glasses when using hand and power tools.
2. Be careful of scissors and saw blades. They're sharp.
3. Demonstrate safety procedures of the drill press.
4. Disconnect the plug before changing the bit in the electric drill.
5. Tighten chuck securely on drill before operating.
6. Each worker should stay at assigned work station during production.
7. Place the sanding work station near ventilation.

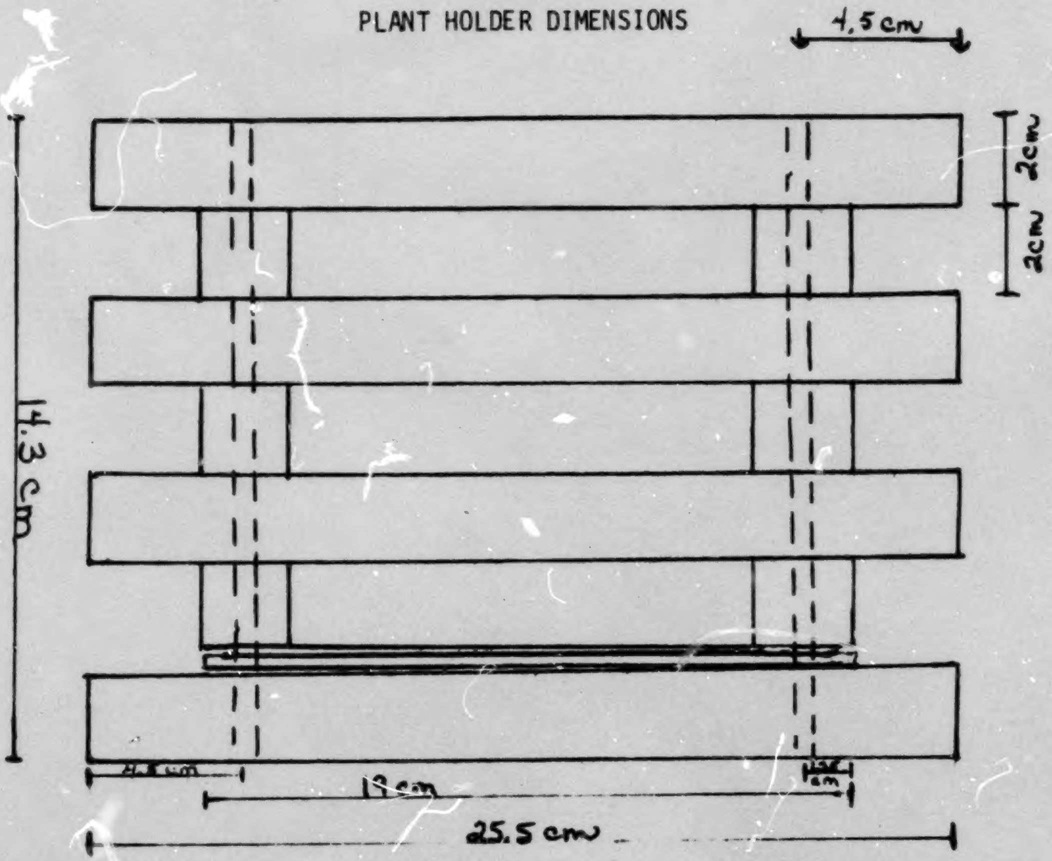
TIPS TO THE TEACHER:

1. Encourage accuracy when measuring and cutting parts.

2. The bottom piece may be of plywood, masonite, scrap paneling or anything hard, then, and easily accessible.

3. Pre-cut boards to lengths that are easy for children to handle.

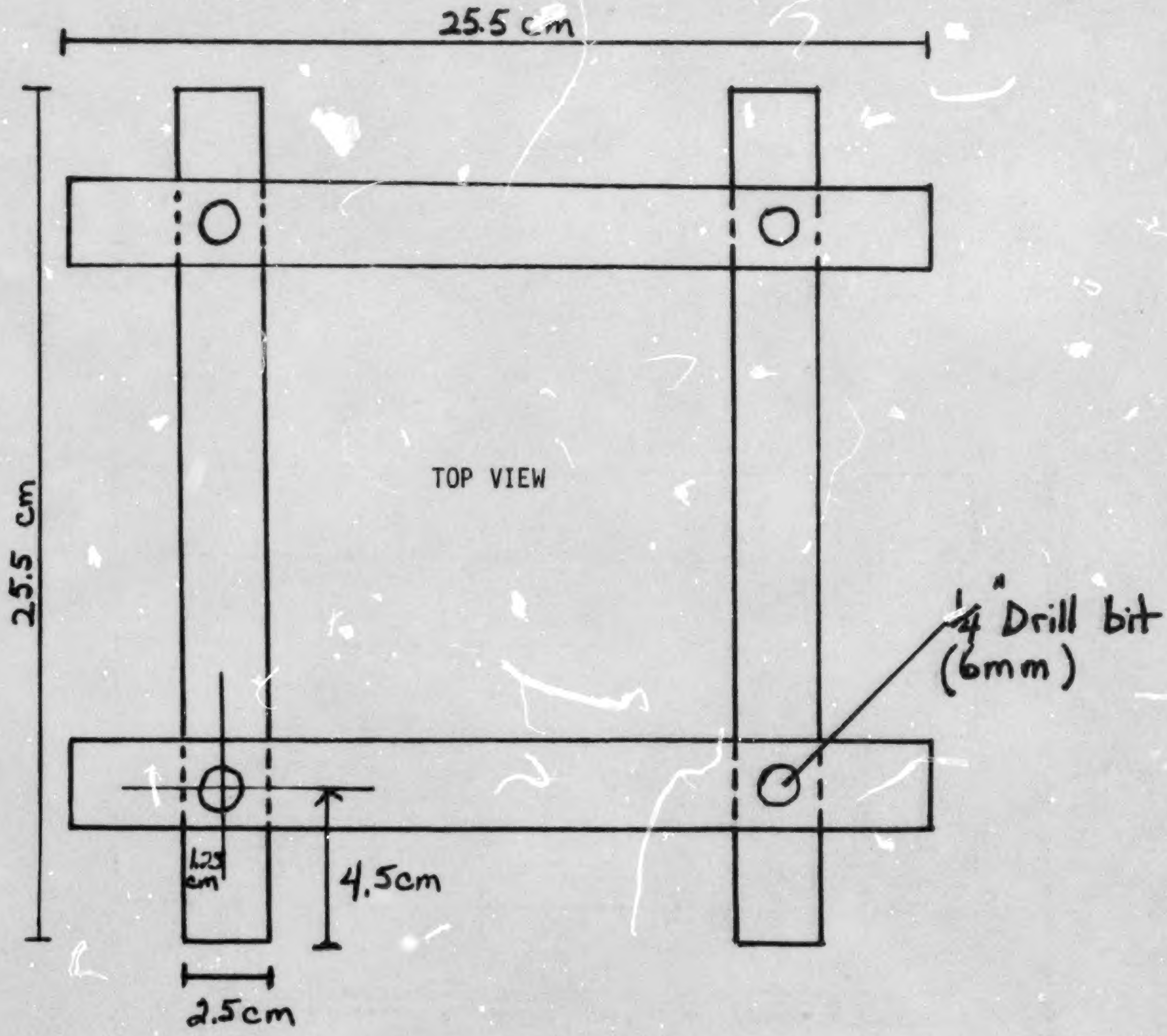
PLANT HOLDER DIMENSIONS



4. Natural jute in 10 pound balls is usually the most economical cord.

5. If work station sheets are glued on light weight cardboard and laminated, they will be reusable when the activity is repeated.

6. Students need to decide upon a company name which will be used on the tags.


25.5 cm
25.5 cm
TOP VIEW
¼" Drill bit
(6mm)
1.25 cm
4.5cm
2.5cm

TIPS TO THE TEACHER Continued

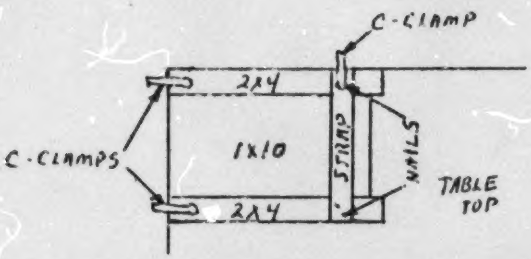
7. "Hire" students for jobs using work stations sheets.

Jotting Space

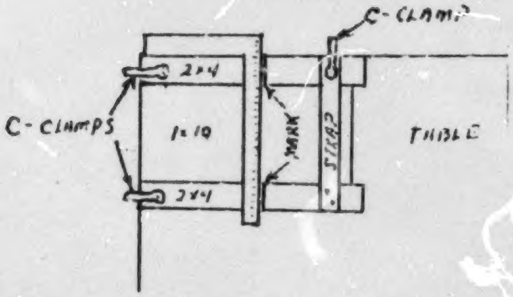
TIPS TO THE TEACHER Continued

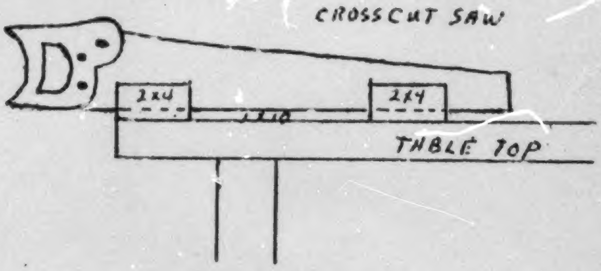
Make sawing jig for boards used for bottom of planters.

a. Toward the edge of the table clamp two 2 x 4 boards on each side of a 1 x 8 board. Nail a wooded strap across the loose ends of the 2 x 4 boards. Clamp the strap to the edge of the table.

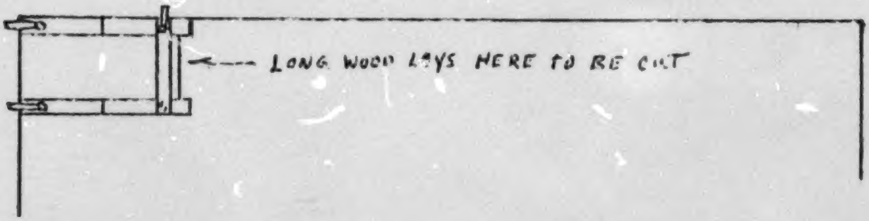

C-CLAMP
2x4
C-CLAMPS
1x10
STRAP
NAILS
TABLE TOP
2x4

b. Lay a framing square across both 2 x 4 boards and mark. Select a cross cut saw and cut both 2 x 4 boards, on the lines at the same time, Miter-box style. Stop sawing when saw scratches the 1 x 8 board. KEEP SAW FLAT.


C-CLAMP
2x4
C-CLAMPS
1x10
MARK
STRAP
TABLE
2x4


CROSSCUT SAW
2x4
1x10
2x4
TABLE TOP

c. To cut boards slip a long piece of wood in back of jig until cut line is directly under saw blade. Keep saw flat while sawing.


LONG WOOD LAYS HERE TO BE CUT

Dear Parent:

As part of our ABC/EE program your child will have the opportunity to participate in hands-on projects in Language Arts, Math, Social Studies, and Science. Your child may be working with basic hand tools, small electrical appliances and tools, wood burners, carving tools, and/or sewing machines.

We will demonstrate equipment and take all precautions for their safety. You may also help by talking with your child about safety in use of tools.

In order for us to have an awareness that you do have a knowledge of your child's activities, we must have your consent before allowing your child to use any equipment.

The attached permission slip must be signed in order for your child to participate in our activities.

You are welcome to visit our classroom at any time during ABC/EE activities. Please feel free to ask any questions concerning this program.

I give my permission for ________________________________ to use the equipment and tools in the classroom ABC/EE activities.

____
(Parent or Guardian)

____
(Date)

FACTORY PRODUCTION PLANT I

Suggested Number of Employees	Work Station Number
1 Shop Foreman	--
1 Safety Engineer	--
2 Layout Workers	1
2 Cutters	2
3 Layout Workers	3
2 Drill Operators	4
2 Burrhands	5
2 Layout Workers	6
2 Cutters	7
2 Layout Workers	8
2 Drill Operators	9
1 Packager	10
1 Expediter	--

FACTORY ASSEMBLY PLANT II

1 Cutter	1
2 Assemblers	2
1 Assembler	3
1 Printor	4
1 Inspector	5

SHOP FOREMEN

1. KNOW EACH JOB IN YOUR FACTORY AND MAKE SURE EACH FACTORY WORKER IS DOING THE JOB CORRECTLY AND EFFICIENTLY.

2. KNOW THE FLOW OF PRODUCTION AND BE ABLE TO ANSWER QUESTIONS THE WORKERS MAY HAVE.

3. FILL IN AT ANY STATION INCASE OF AN ABSENCE.

4. IF YOU SEE A SAFETY VIOLATION CALL THE SAFETY ENGINEER.

5. MAKE SURE SUPPLIES ARE PLENTIFUL AT EACH STATION.

SAFETY ENGINEER

1. MAKE SURE WORKERS ARE WEARING GOGGLES IN PLANT 1.

2. KEEP WORK STATIONS AS CLEAN AS POSSIBLE. CLEAN UP EXCESSIVE TRASH AND DISPOSE OF IT.

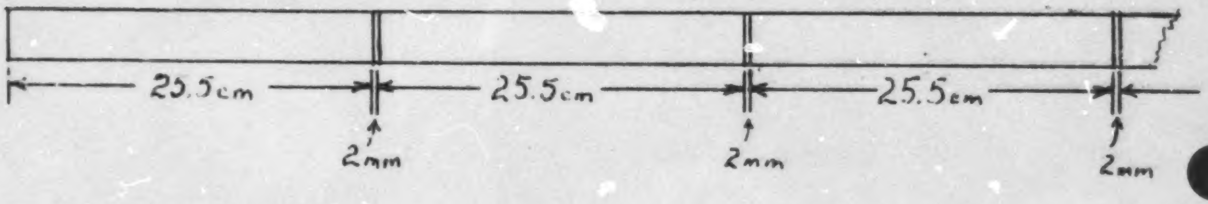
3. KEEP TOOLS IN GOOD REPAIR.

4. CHECK LIGHTING AND VENTILATION.

PLANT 1
LAYOUT WORKER

STATION #1

1. MEASURE AND MARK BOARDS AS FOLLOWS:



2. MAKE SURE THERE IS A 2 MM SPACE BETWEEN EACH 25.5 CM LINE.

3. MARK FULL LENGTH OF BOARD.

4. PASS MARKED BOARDS TO WORK STATION #2.

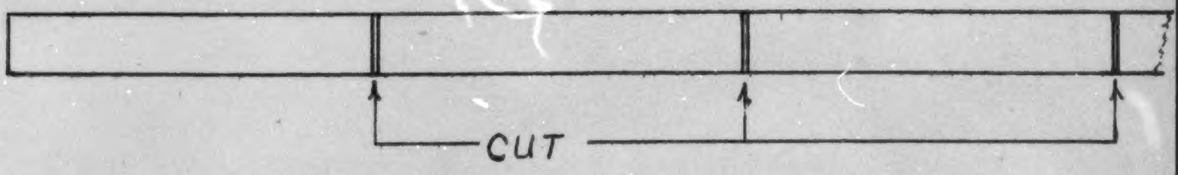
Needed from tool crib:
- try-square
- pencil
- centimeter ruler
- softwood cut 2.5 cm wide

PLANT #1
CUTTER

STATION #2

1. PLACE MARKED WOOD IN MITER BOX.

2. SAW BETWEEN THE 2 MM LINES.



3. CUT ALL SPACES FULL LENGTH OF BOARD.

4. PASS WOODEN PIECES TO WORK STATION # 3.

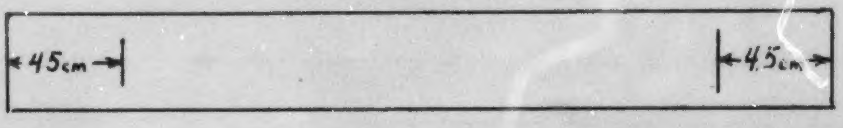
Needed from tool crib:
  miter box
  cross-cut saw

PLANT #1
LAYOUT WORKER

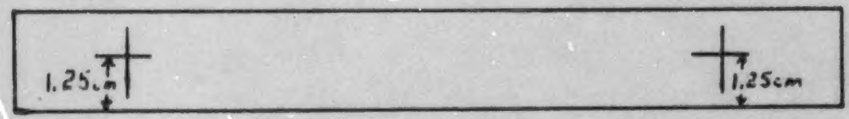
STATION #3

1. MARK BOTH ENDS OF EACH PIECE OF WOOD AS FOLLOWS:

   MAKE A LINE ACROSS THE WOOD 4.5 CM FROM EACH END.



   MEASURE IN 1.25 CM FROM THE SIDE OF THE WOOD. MARK ACROSS THE 4.5 CM LINE.



2. PASS MARKED BOARDS TO WORK STATION # 4.

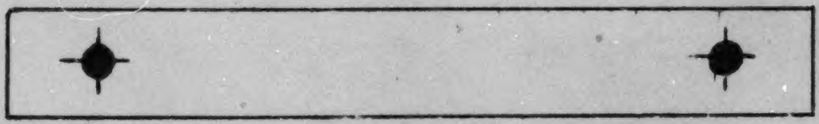
Needed from tool crib:
- pencil
- try-square
- centimeter ruler

PLANT #1
DRILL OPERATOR

STATION #4

1. PLACE WOOD ON DRILL PRESS OR IN VISE.

2. DRILL 6 MM HOLES WHERE LINES CROSS AS BELOW:



3. PASS DRILLED BOARDS TO WORK STATION #5.

Needed from tool crib:
  drill bit 1/4" (6 mm)
  hand drill or electric drill
  drill press or vise

~~PLANT #1~~

BURRHAND

STATION #5.

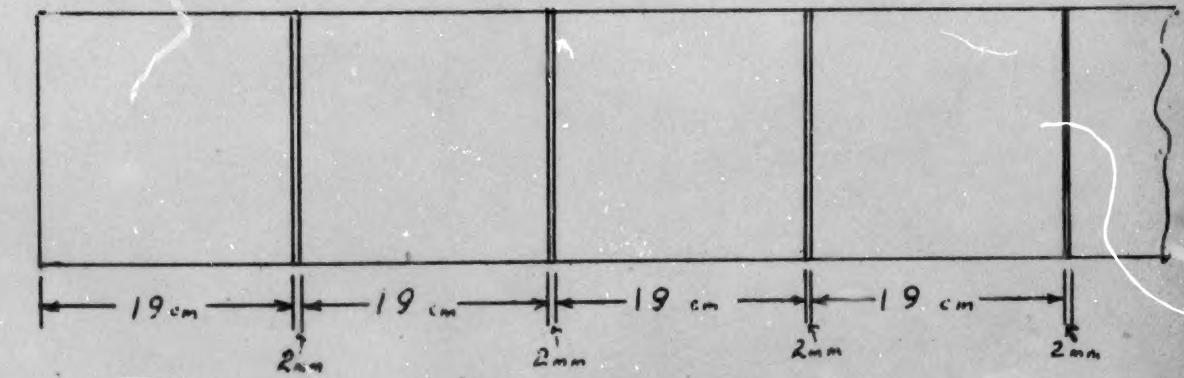
1. USING SAND BLOCK, SAND ALL ENDS.
2. ALL SPLINTERS MUST BE REMOVED.
3. PASS SANDED BOARDS TO WORK STATION # 10.

Needed from tool crib:
  sanding blocks
  sandpaper (pre-cut in 1/4's)
  thumb tacks

PLANT #1
LAYOUT WORKER

STATION #6

1. MEASURE AND MARK BOTTOM MATERIAL AS FOLLOWS:


19 cm
19 cm
19 cm
19 cm
2 mm
2 mm
2 mm
2 mm

2. MAKE SURE THERE IS A 2 MM SPACE.

3. MARK FULL LENGTH OF BOARD.

4. PASS MARKED BOARDS TO WORK STATION #7.

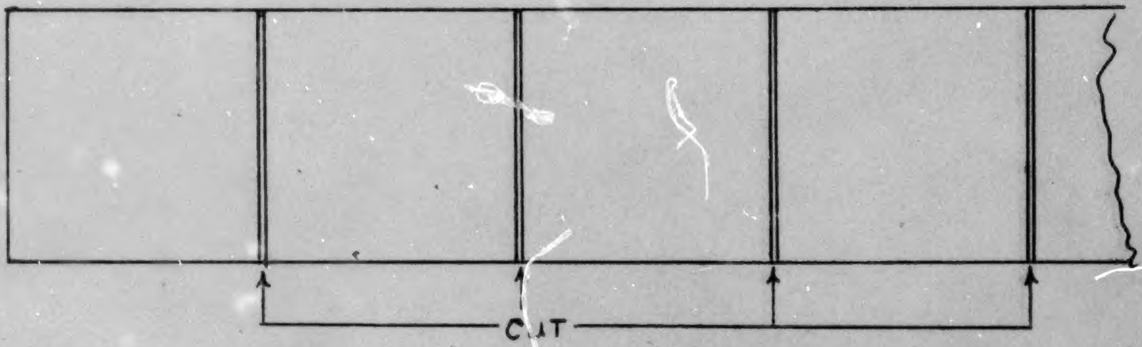
Needed from tool crib:
- centimeter ruler
- pencil
- try-square
- wood for bottom cut 19 cm wide

PLANT #1
CUTTER

STATION #7

1. PLACE MARKED BOARD IN SAWING JIG.

2. SAW BETWEEN THE 2 MM LINES.



3. CUT ALL SPACES FULL LENGTH OF BOARD.

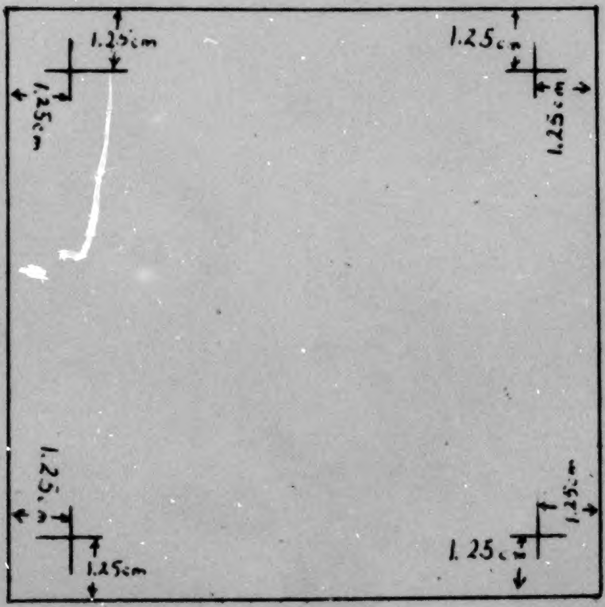
4. PASS CUT PIECES TO WORK STATION # 8.

Needed from tool crib:
  sawing jig
  cross-cut saw

PLANT #1
LAYOUT WORKER

STATION #8

1. MARK EACH AS BELOW: MEASURE 1.25 CM IN FROM EACH CORNER OF THE BOTTOM PIECE.


1.25cm
1.25cm
1.25cm
1.25cm
1.25cm
1.25cm
1.25cm
1.25cm

2. LINES SHOULD CROSS AS ABOVE.

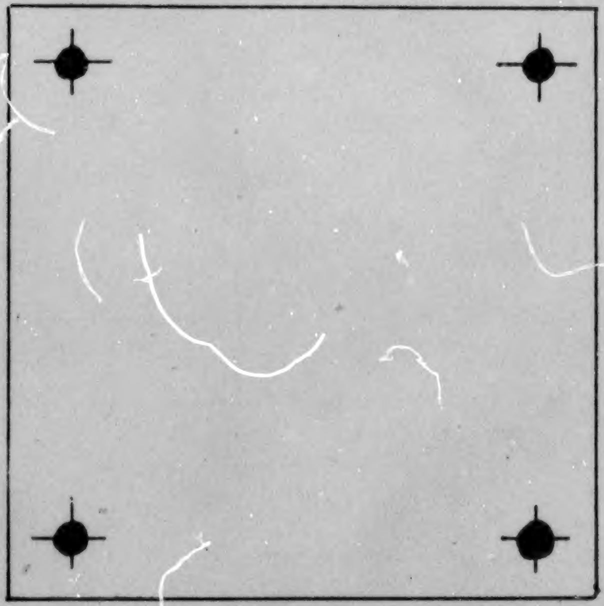
3. PASS MARKED BOARD TO WORK STATION # 9.

Needed from tool crib:
  centimeter ruler
  try-square
  pencil

PLANT #1
DRILL OPERATOR
STATION #9

1. PLACE BOTTOM ON SCRAP PIECE OF BOARD.

2. DRILL 6 MM HOLES IN EACH CORNER WHERE LINES CROSS AS BELOW.



3. PASS DRILLED BOTTOM TO WORK STATION # 10.

Needed from tool crib:
- drill bit
- drill
- scrap wood to put between bottom and table top

212

PLANT #1
PACKAGER

STATION #10

1. Count out 14 side boards.

2. Count out 1 bottom.

3. Place 14 sides and 1 bottom in a paper sack.

4. Place paper sack on delivery tab[illegible].

Needed from tool crib:
  paper sacks

EXPEDITER

FACTORY RUNNER

1. PICK UP PAPER BAGS FILLED WITH PARTS FROM DELIVERY TABLE IN FACTORY #1 AND PLACE THEM ON DELIVERY TABLE IN FACTORY #2.

2. PICK UP FOLDED EMPTY PAPER BAGS FROM DELIVERY TABLE IN FACTORY #2 AND PLACE THEM ON THE DELIVERY TABLE IN FACTORY #1.

PLANT #2
CUTTER

STATION #1

1. CUT PIECES OF JUTE ROPE 2 M LONG.

2. WRAP BOTH ENDS OF ROPE WITH MASKING TAPE.

3. PASS CUT JUTE ROPE TO WORK STATION #2.

4. WHEN YOUR WORK IS AHEAD OF SCHEDULE, PICK UP EMPTY PAPER BAGS AT WORK STATION #2 IN COLLECTION BOX. FOLD PAPER BAGS AND RETURN THEM TO DELIVERY TABLE.

Needed from tool crib:
- scissors
- masking tape
- ball of rope or jute
- meter stick

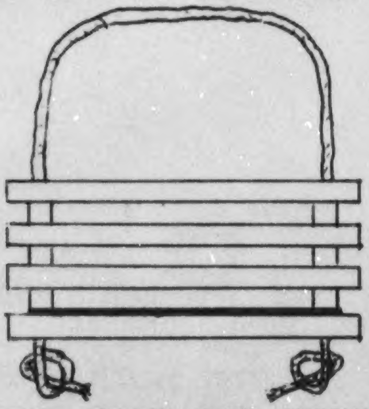
PLANT #2

ASSEMBLER

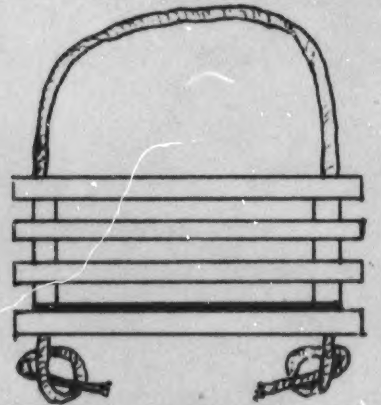
STATION #2

1. GO TO DELIVERY STATION AND PICK UP A PAPER BAG. TAKE PARTS OUT OF PAPER BAG AND LAY PAPER BAG IN COLLECTION BOX.

2. THREAD ONE ROPE THROUGH TWO SIDES FROM TOP. TIE KNOTS AT THE BOTTOM.



3. THREAD SECOND ROPE THROUGH THE OTHER TWO SIDES FROM TOP. TIE KNOTS AT THE BOTTOM.



4. PASS TIED HOLDER TO WORK STATION #3.

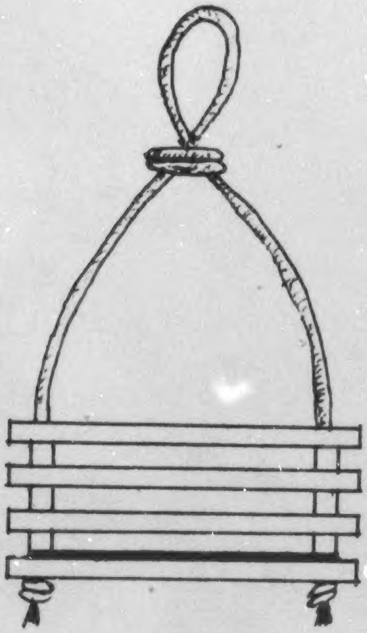
PLANT #2
ASSEMBLER
STATION #3

1. SET PLANTER ON TABLE.

2. PULL BOTH ROPES TOGETHER.

3. FORM A LARGE LOOP AT TOP OF ROPES.

4. TIE A KNOT.



5. PASS FINISHED HOLDER TO WORK STATION #5.

PLANT #2
PRINTER

STATION #4

1. PRINT COMPANY NAME ON TAG.
2. PASS TAGS TO WORK STATION #5.

Needed from tool crib:
paper for tags
pen or typewriter

PLANT #2
INSPECTOR

STATION #5

1. FINAL INSPECTION.
2. STAPLE COMPANY TAG ON LOOP.
3. PRINT INSPECTORS NUMBER ON THE TAG.
4. PASS FINISHED PRODUCT TO STORAGE TABLE.

Needed from tool crib:
  stapler
  pen

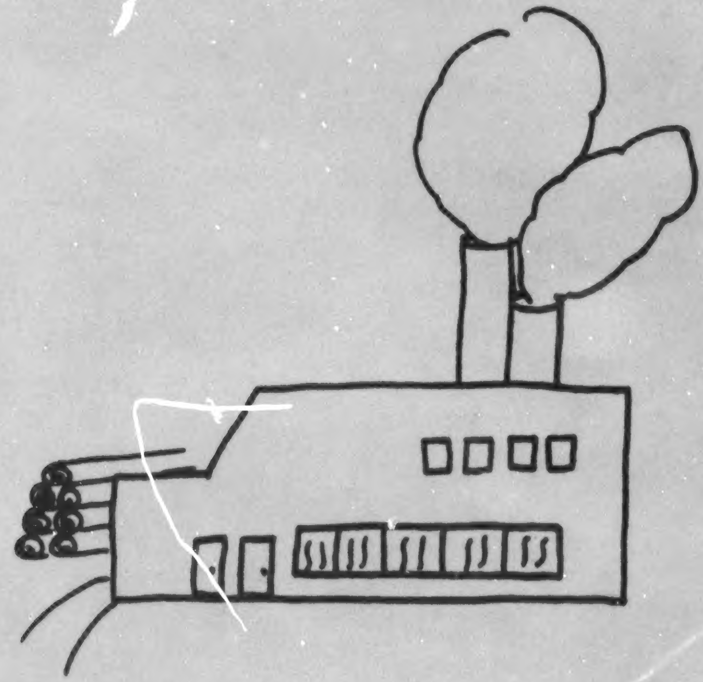
Dear Parent:

As an activity for social studies, math and language arts, our class mass produced hanging plant holders.

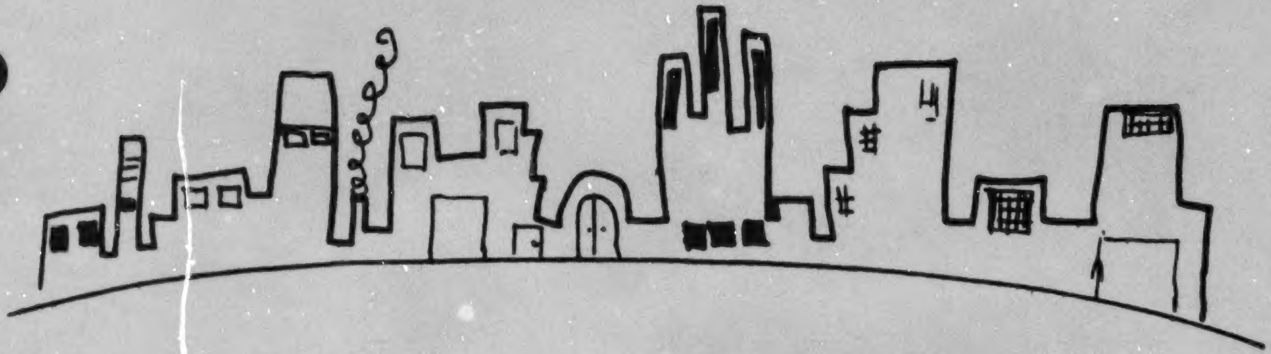
We set-up two factories, hired workers, conducted on the job training and put assembly-line production in motion.

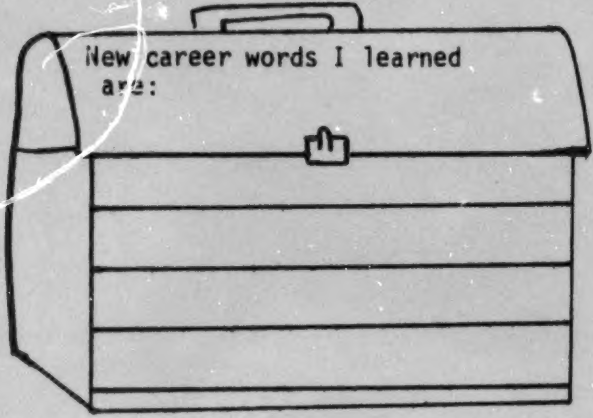
Factory production workers are just one of the important occupations in our modern world. To learn more about careers share some experiences from your job with your child.

Your child's occupation title and classroom factory experience can in turn be shared with you.

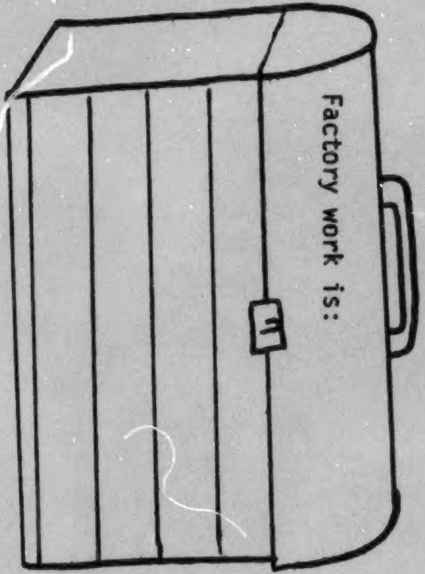


MY FACTORY EXPERIENCES

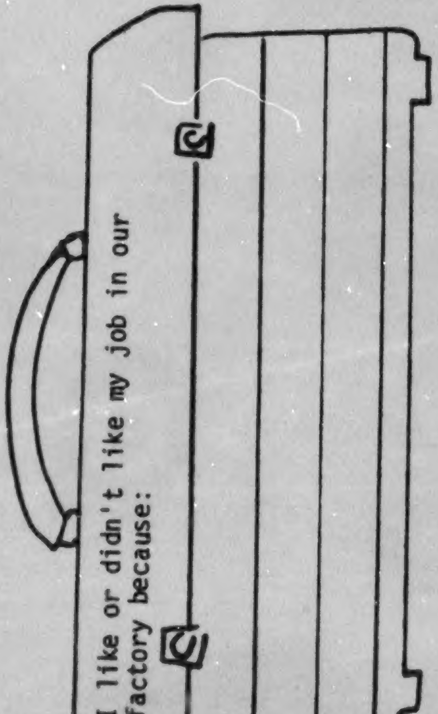




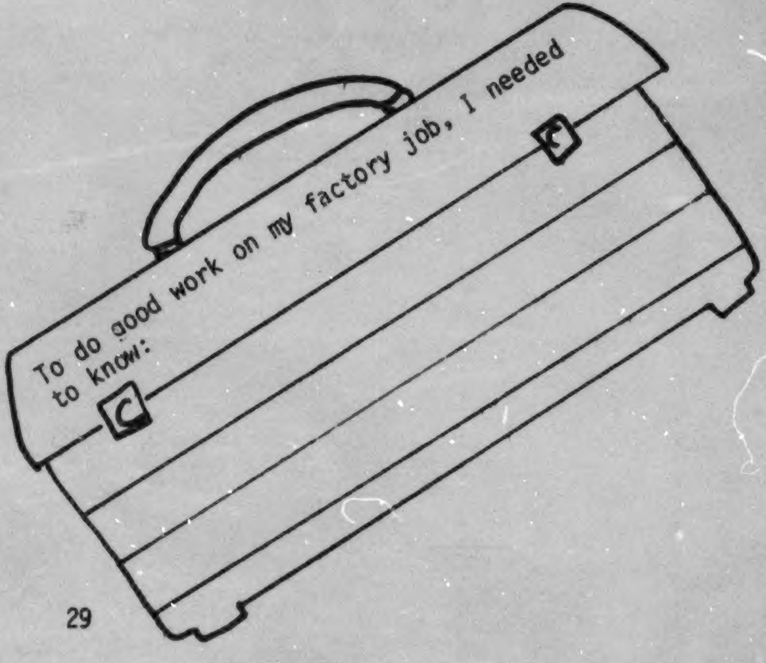
New career words I learned are:



Factory work is:



I like or didn't like my job in our factory because:



To do good work on my factory job, I needed to know:

FOR THE TEACHER

Brooksby, Sherril. *Career Exploration Activity Cards For Fun.* Palos Verdes Peninsula, CA: Frank Schaffer, 1975. (26616 Indian Peak Road)

Farnette, Cherrie, Imogene Forte, and Barbara Loss. *At Least A Thousand Things To Do; A Career Awareness Activity Book.* Nashville, TN: Incentive Publications, 1977.

Schwartz, Lenda. *When I Grow Up; Intermediate; Discovering Careers Through Self-Directed Activities.* Englewood Cliffs, NJ: Prentice-Hall Learning Systems, Inc., 1976. (P.O. Box 47X)

FOR THE STUDENT

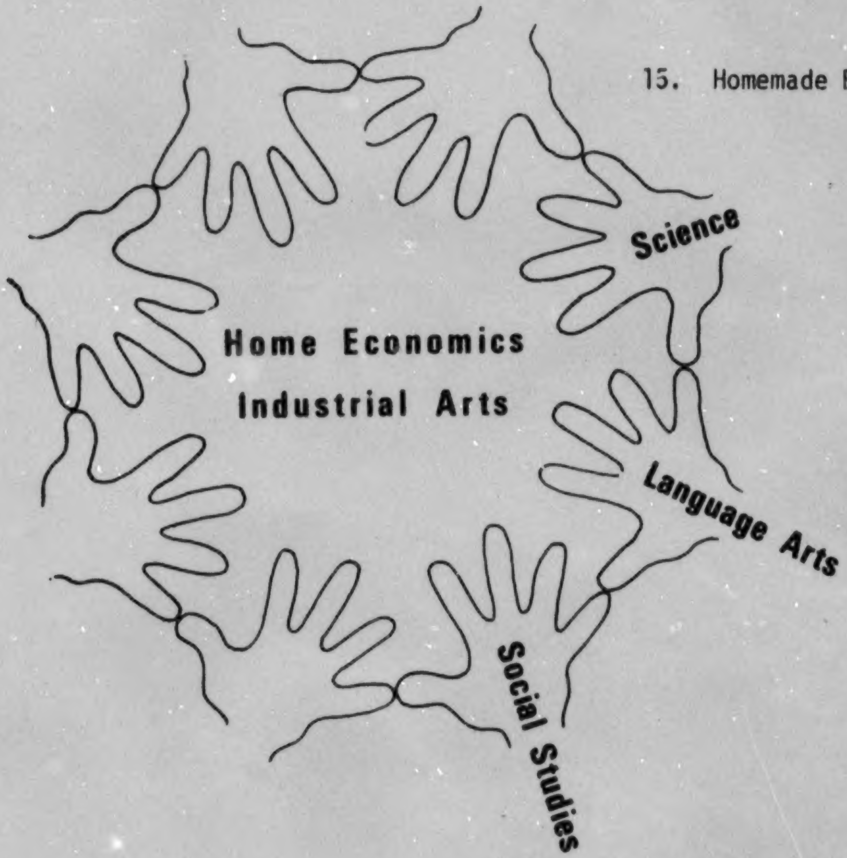
Hopke, Williams and Barbara Parramore. *Childrens Dictionary of Occupations.* BalaCynwyd, PA: Career Futures Inc., 1977. (146 Montgomery Avenue)

Looking Forward To A Career Series. Minneapolis: Dillion Press Inc., 1974. (500 South Third Street) This series includes books on many different areas of careers and is on the intermediate reading level.

The Educational Research Council of America, *Real People At Work Series.* Washington, D.C.: Changing Times Education Service, 1975. (1729 H. Street NW) A wide variety of occupations are depicted in these upper-elementary level paperback booklets.

That's a good one..
write it down!

15. Homemade Bath Salts


Science
Home Economics
Industrial Arts
Language Arts
Social Studies

Hands-on Approach

wichita public schools
wichita, kansas

Activity Based Curriculum for Elementary Education

ACTIVITY BASED CURRICULUM FOR ELEMENTARY EDUCATION

ACTIVITY:

Homemade Bath Salts

AREA TITLES AND MAJOR CONCEPTS:

Language Arts
  Oral language development
  Following directions

Math
  Metric volume measurement

Science
  Observing - using vision, smell, and touch
  Recording observations
  Interaction - absorption

Social Studies
  Consumer education

DESCRIPTION OF ACTIVITY AND ENRICHMENT:

In a classroom learning center, student groups work together to prepare a quart of bath salts to feel, smell, and observe properties of objects. For a period of at least two weeks, each student will observe the absorption of color in all the jars while they are turned daily. After the quart of salts is evenly colored, it will be used to fill small decorated jars, again providing opportunities for smelling, touching, and visual observation.

RELATED CAREERS:

Department Store Clerk, Scientist, Market Researcher, Package Designer, Truck Driver.

SUPPLIES:

Fragrance (several leftovers)
Food coloring
Epsom salts (2 lb. per group)
Paper cups (1 per group)
Ribbon and other trims for individual jars
Masking tape
Popsicle stick, tongue depressor, or straw (1 per group)
Pencils
Work sheet for students (page 7)
Poster with directions for center (page 6)

EQUIPMENT:

Small pitcher of water
Quart jars with tight lids (1 per group)
Metric *glass* measuring cup
2 large spoons for dipping salts into quart jar
2 trays
A small jar or bottle for each student (such as large baby food--used after salts are colored)
Funnel

ACTIVITY PROCEDURES:

1. A classroom learning center is set up for making the bath salts. Small groups of 3 or 4 work together, rotating until all groups have been in the center.

   Use:
   a. Bath Salts directions (page 5) on a center poster.
   b. Evaluation sheet (page 6).

2. At various times during the two or three weeks the bath salt jars are being turned, discuss observations. Why is the color spreading? Is all the color the same shade? Why are the jars turned? Etc.

3. Each student decorates a small jar to fill with bath salts. This may be done with tissue paper, felt, or fabric scraps glued into designs.

4. Have students draw designs or borders on Parent Letter, which is to be folded card style and tied to the jar with ribbon or yarn. (page 7.)

5. Set up center for the groups to fill their small jars. Use a large tray or newspaper to catch spills in order to prevent waste

FOLLOW UP IDEAS:

Have students bring things to make a class display of objects with a smell. Examples would be:

fruit
onion
hay
pine needles
flowers
spices

Use some of the things from the smelling table for a guessing game.

Discuss things that are harmful to smell. Check with the local drug council or mental health clinic for a list of common objects that is being misused for inhalants.

Conduct field research on the price of commercial bath salts. Find the cost of the bath salts made in class. Make a graph to show the difference in cost per gram or ounce.

EVALUATION:

Each student completes the Bath Salts Work Sheet (page 6) while still with the group in the center or retain paper cup for them to use when the Work Sheet is filled out.

Oral discussion and response by students about the ingredients, process of absorption, finished product, etc. is an important evaluation technique for this activity.

PLEASE RECORD ALL BRAINSTORMS.

HEALTH AND SAFETY PROCEDURES:

1. Stress the importance of handling glass jars carefully. Do let the children turn the jars. Perhaps a class helper for the day could be responsible for turning all the jars in the morning and/or afternoon.

2. This activity involves a lot of pleasant smells. There are some things that are harmful to inhale, such as airplant glue and gas. Children should be made aware of the wise use of the sense of smell.

3. Perfume, if spilled, will take some finishes off of wood. Set up the activity on a table with Formica top, if possible.

TIPS TO THE TEACHER:

1. Use a glass metric measuring cup. The perfume will dull the finish of a plastic cup.

2. Set the quart jar on a tray or paper for the students to fill for ease in clean-up and less waste.

3. It is much cheaper to buy epsom salts in four- or five-pound boxes, rather than by one-pound containers.

4. Added experiences can be gained by some groups mixing two colors to make orange, blue-green, etc. This also makes it possible for each group to have a different color bath salts.

5. Use water to add with fragrance in order to make the 50 ml of liquid.

6. In advance, make a poster shaped like a jar. Print the directions on the center poster from the Student Activity Sheet (page 5).

7. It takes more yellow food coloring than any of the other colors, in order to see the absorption process and for an attractive product.

Student activity Sheet

BATH SALTS

1. Pour some perfume into the measuring cup. Add enough water to make 50 ml of liquid. Pour into a paper cup.
2. Select one color. Put some drops of color into the paper cup. Stir with the stick. Set aside.
3. Fill a large jar with epsom salts.
4. Now, pour the perfume mixture into the jar. Do not mix or shake the jar.
5. Screw the lid on your jar.
6. Put tape on the jar. Write your first name on the tape.
7. Complete the sentences on the work sheet.
8. Put your paper cup and stick into the trash. Have center ready for next group.
9. Later today when the coloring has reached the bottom, turn the jar over.
10. The jar will be turned each day for two weeks.

NAME ______________________________

BATH SALTS WORK SHEET

Finish the sentences.

1. Touch some epsom salts. It feels like:

____

2. The paper cup we used smells like:

____

3. Our jar of bath salts looks like:

____

4. I learned that:

____

ABC/EE

Dear Parent,

These bath salts are the result of a science and language arts activity.

We had fun making the bath salts. After smelling and touching, we wrote sentences to describe it. For several days, we watched the color spread.

The bath salts are now ready for you to enjoy.

RESOURCE SHEET

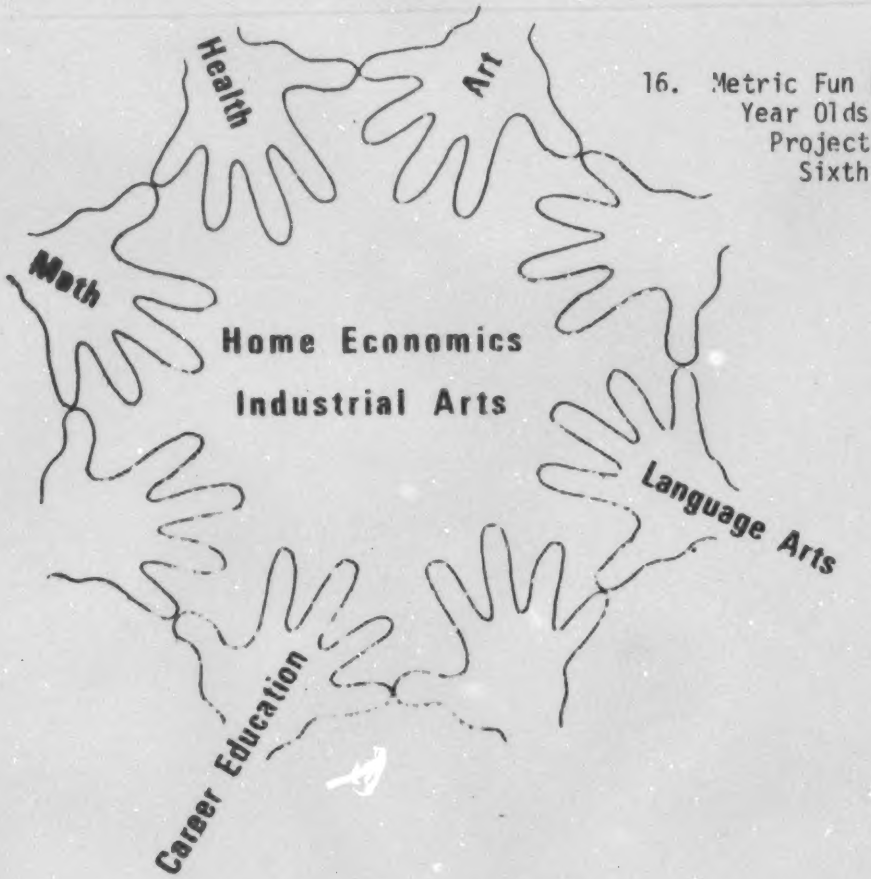
FOR THE TEACHER:

Brierley, Paula. "Homemade Bath Salts," Ideal's Christmas Crafts, 1976, page 60.

Lorton, Mary Baratta. Workjobs Activity, Centered Learning For Early Childhood Education. Rolling Meadows, IL: Addison-Wesley Publishing Co., 1972. (1943 Hicks Rd.)

Price, Lowi and Marilyn Wronsky. Concoctions. New York: E.P. Dutton and Company, In., 1976.

Jotting Space


Health
Art
Math
Home Economics
Industrial Arts
Language Arts
Career Education

16. Metric Fun Events for Five Year Olds - A Service Project by the Sixth Grade

Hands-on Approach

wichita public schools
wichita, kansas

A
C
E E

Activity Based Curriculum for Elementary Education

ACTIVITY BASED CURRICULUM FOR ELEMENTARY EDUCATION

ACTIVITY TITLE:

Metric Fun Events for Five Year Olds
A Service Project by The Sixth Grade

AREA TITLES AND MAJOR CONCEPTS:

Career Education
Careers related to children

Health
Nutritious snacks

Language Arts
Reading and following directions
Oral communications - giving directions

Math
Metric measurement - linear and volume

Social Studies
Study of people - characteristics of young children
Leadership roles, planning, interactions

DESCRIPTION OF ACTIVITY AND ENRICHMENT:

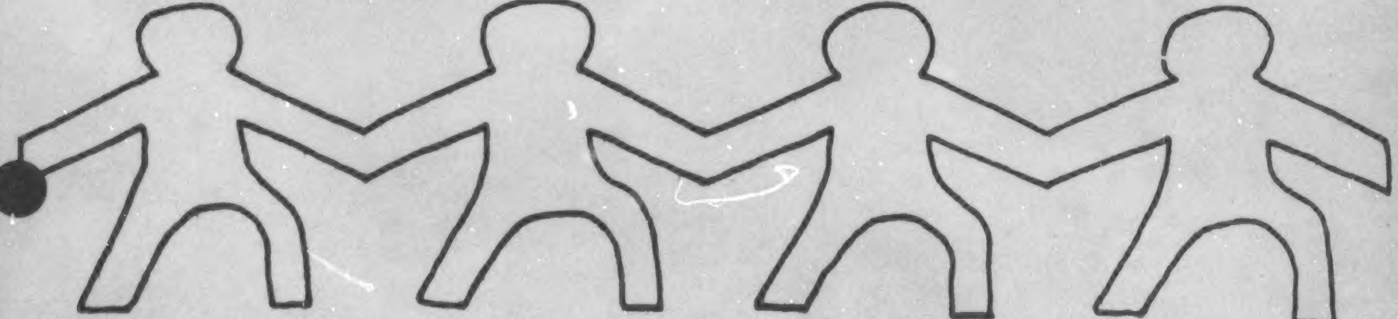
Class members will measure in meters while planning and conducting a variety of field events for the children. Milliliters and liters will be used to prepare snacks. Ribbons will be measured in centimeters. To plan appropriate events and to understand needs, characteristics of a five-year-old will be presented. The class will explore the wide variety of careers where a knowledge of children's needs is required.

RELATED CAREERS:

Child Day Care Worker, Doctor, Librarian, Bus Driver, Children's Writer, Social Worker, Nurse, Teacher, Police Officer, Marketing Researcher.

REQUIRED FOR THIS ACTIVITY:

Start early to collect cartoons from the Sunday comics that illustrate characteristics of young children. These will be used to make transparencies for this activity.



SUPPLIES:

- Ribbon - approximately 3 cm wide, 18 cm per ribbon
  4 or 5 colors depending upon number of 5-year olds in each event - Each child receives a ribbon for that event.
- Pins
- Masking tape
- Wax paper
- Stencils and gold spray paint or fabric marking pen or fabric paint for ribbons
- Paper cups
- Napkins
- Colored paper for children's tags

Go Power Cookies - per batch (makes 40-50)
Dried milk - 250 ml
Corn syrup - 250 ml
Peanut butter - 250 ml (300 g)
Whole wheat cereal flakes - 1 liter (135 g)

Red Cooler - per recipe
Sugar - 250 ml
Unsweetened red Kool-Aid
Fruit juice - 1 can (1.36 L)

JOT IT DOWN!

EQUIPMENT:

- Centimeter rulers
- Pinking shears or fabric scissors
- Meter sticks
- Metric measuring cups - 3
- Liter pitcher
- Mixing bowl, large - 2
- Rubber scrapers - 5
- Wooden spoons - 2
- Serving spoon - (in peanut butter)
- Teaspoons - 3
- Trays
- Large container for Red Cooler drink

CLEAN UP CENTER

- 2 plastic dish pans, dish drainer, and tray
- Tea towels
- Dish soap
- Liquid bleach
- Disposable dish cloth
- Paper towels for hands

ACTIVITY PROCEDURES:

1. Introduce the activity. Decide upon the children that will be invited to participate in the fun events, such as a kindergarten class or day-care group.

2. Conduct student planning of metric events for the children. Allow class members to come up with their own list. Below are only suggestions for the teacher:

   15 meter forward-backward dash
   10 meter skip up-gallop back race
   15 meter tummy scooter race (if held in gym)
   Standing broad jump
   Bean bag throw
   Obstacle course as final event for all children such as balance beam, low climbing, and crawling under.

   Have students check event plans with physical education teacher to see if appropriate for children.

3. Look at the characteristics of five-year-olds, using transparencies made from Sunday comics of young children in true-to-life situations. Use Portrait of Five-Year-Old (page 8 and 9) as leaflet for additional reading and discussion in area.

4. Divide into small student groups and have each group select an event. In advance, have names of visiting children and assign 4 or 5 to each student group. They will be responsible for these children all the time.

5. Organize activities to prepare for Metric Fun Events. Set up classroom learning centers. Rotate groups in centers.
   a. Measure ribbons and mark or spray paint placement.
   b. Make cookies (recipe on page 10) with one group of 4 to 6 students in the center at a time.
   c. Measure and mark distances for races.
   d. Make name and event tags for the children. Color code each group.
   e. Metric games and activity cards with metric equipment such as gram scales, meter stick, centimeter ruler, liter pitcher, metric cup and spoons. (Use Liter Guess Game, pages 11 to 13 .)

6. Conduct Fun Events with young children. One event could be run at a time while other students and children watch.
   a. Have the students greet children in their assigned group; put on name and event tag, conduct their event, pin on ribbons, and be with their children during all the session.
   b. After all the groups have completed their event, a class leader starts the obstacle race with all the children following.
   c. Serve cookies and punch, using classroom floor for seating. Assign servers and a clean-up crew.

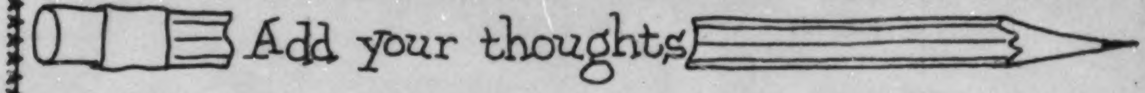
ACTIVITY PROCEDURES: Continued

7. After the children leave, let the students tell points of interest. Relate some of actions to characteristics studied and metric information.

8. Explore the world of careers in which a knowledge of children's needs and development would be helpful.

9. Discuss the use of meter, centimeter, liter, and milliliter and where each would be used.

10. Send home Parent Letter (page 14) to describe activity and enrichment. Have copies of recipe (page 10) available for students that want to make it at home. *Why was the cookies a good snack? Rate according to Basic Four Food Group.*



FOLLOW UP IDEAS:

Have students draw a *newspaper comic strip* on long paper, illustrating "young" children in a true-to-life situation. Display these comics on the bulletin board.

Continue practice in metrics with assigned objects to measure, metric games, and activity centers.

Use the yellow pages of a telephone directory, newspaper ads, and magazine ads to make a classroom survey of companies and careers that are influenced by children's need for health, protection, and education.

Increase estimation abilities in grams by filling six identical cups or containers with different contents such as confetti, rubber bands, nails, sand, thumbtacks, leaves, peanuts, and cotton balls. The student takes turns lifting each container and then arranging from lightest to heaviest. Weigh the cups in grams to check and place in correct order.

Encourage students to bring in cartoons about children. Have them tell what it illustrates.

EVALUATION:

Show some cartoon transparencies of children. Have each student write at least one characteristic of young children for each cartoon.

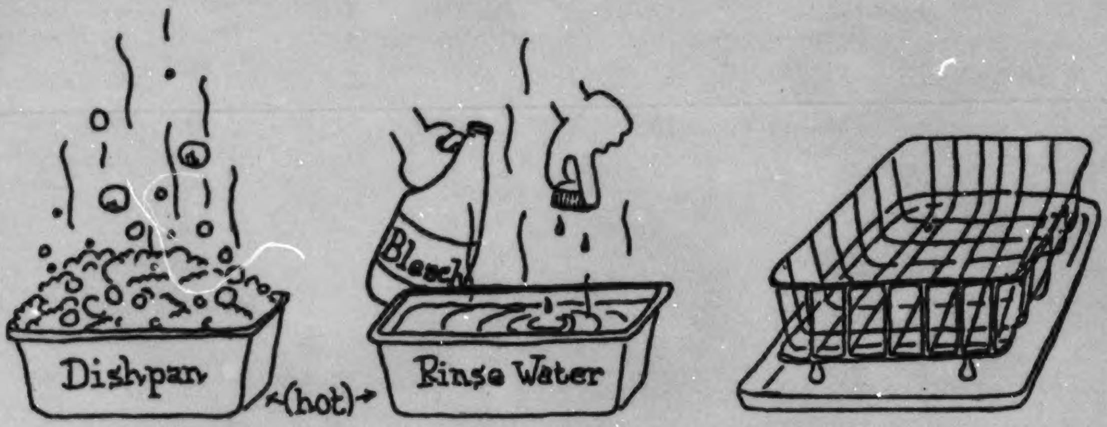
Instruct the students to list at least five things that would be measured in:

- Meters
- Centimeters
- Liters
- Milliliters

237

HEALTH AND SAFETY PROCEDURES:

1. Wash hands before handling food.
2. Make sure that all work surfaces are clean.
3. Introduce safety factors to consider in caring for preschoolers such as safe toys and play equipment, storage of poisons, and safety rules.
4. Wipe up spills immediately to prevent falls.
5. Rate the snack in this activity by classifying ingredients by the Basic Four Food Groups.
6. Clean Up Station



Cut disposable dish cloths in half, using one half for each dish pan to be used in the classroom.

Have tea towels available for drying the dishes when air drying in the drainer is not possible.

Add one capful of liquid bleach to the rinse water for sterilization of the dishes.

Clean up is part of the activity and should be planned with the class.

Use clean recycled plastic jug to carry warm water to the clean-up center.

TIPS TO THE TEACHER:

1. Make up a variety of metric classroom games in addition to the one on pages 11 to 13, and/or activity cards for students to use as time allows during planning and preparation for the metric field "hour."

2. Keep the session with the young children short and things moving because of their attention span.

3. Have the groups that are in charge of the broad jump and bean bag throw to mark the locations, give ribbons and later after the children have left, come back and measure in meters. Young children's attention span is short.

4. The group that plans the final obstacle course should go over these plans with the physical education teacher to check for appropriateness for young children. It would give the students a professional opinion.

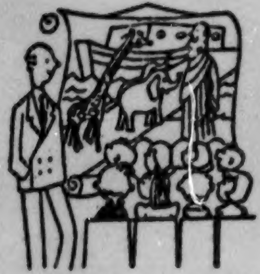
5. Plan groups so only four or five children are competing in an event. Have a ribbon for each child.

6. Select events that the young children will be familiar with or can easily see what to do.

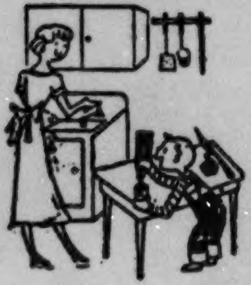
7. If ribbons are lettered with stencils and gold paint, runs can be easily scraped off.

8 The Portrait Of A Five-Year-Old (pages 8 and 9) can be made in leaflet form by duplicating the pages on one sheet and folding in half.

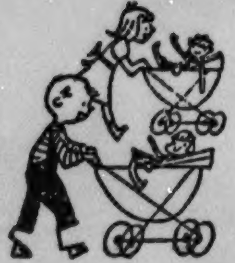
PLEASE RECORD ALL BRAINSTORMS.



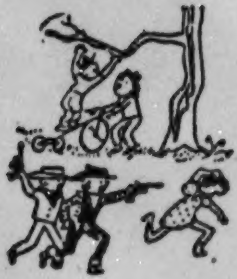
Likes Sunday school.



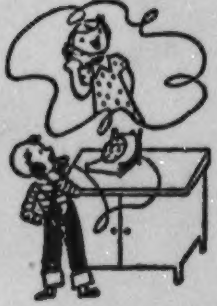
Wants to please and help.



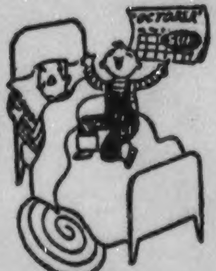
Both boys and girls enjoy playing dolls and housekeeping.



Two play best together; two children are apt to gang up on third one.

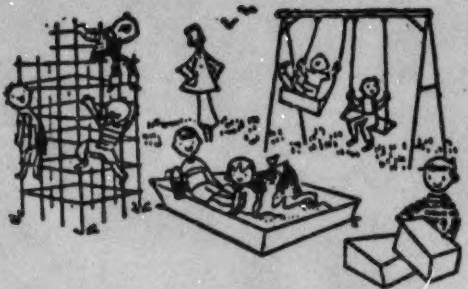


Talks a lot and clearly.



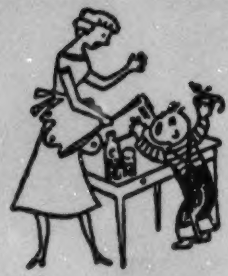
Beginning to understand time words.

Portrait of a Five-Year-Old

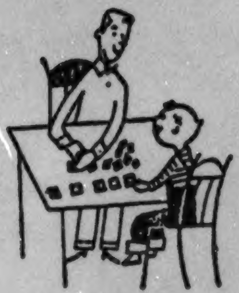


Sand box, swing, climbing apparatus, and bikes are popular.

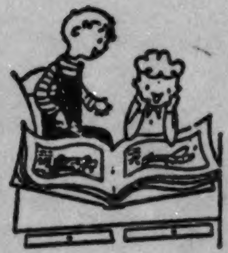
Often works on own project when in free group play.



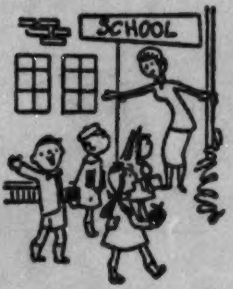
Argumentative and cries if scolded sharply.



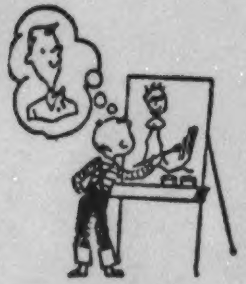
Likes to play simple counting and alphabet games.



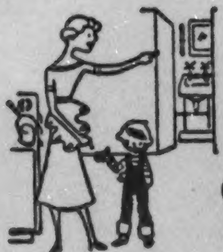
Enjoys having parents read.



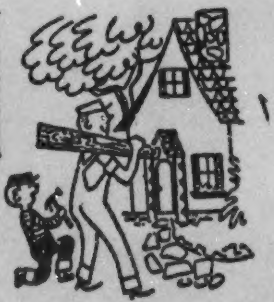
Usually adjusts easily to kindergarten.



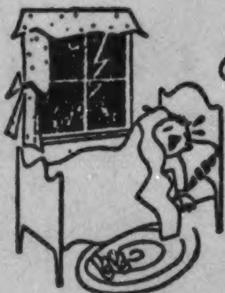
Likes to paint, draw, color, paste; definitely right- or left-handed.



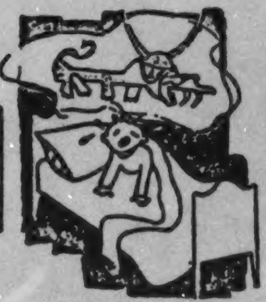
Washes face and hands, if reminded. Still needs bath supervision because of hot water danger.



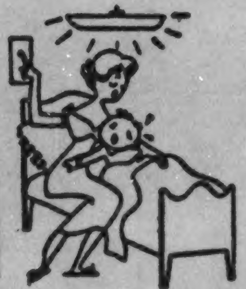
Likes to go on expeditions.



Afraid of thunder, and sirens at night.



Frequent dreams and nightmares. May awaken screaming.



Reassuring will help fears. Logical arguments and ridicule won't help.

GO POWER COOKIES
(Unbaked and Nutritious)

PEANUT BUTTER

1. Mix together in large bowl:

   250 ml dried milk
   250 ml corn syrup
   250 ml peanut butter

2. Stir in and mix well: 1 L whole wheat cereal flakes.
   Use a big spoon and your muscles. It will be a stiff mixture.

3. Drop by spoonfuls onto wax paper.

   DO NOT BAKE!

4. Chill before serving.

   Makes 40 to 50 medium cookies.

RED COOLER

250 ml sugar
2 L water
1 pkg. unsweetened red Kool-Aid
1 can (1.36 L) fruit juice

Chill or add ice just before serving.

Makes 28 servings (125 ml each)

Use a measuring cup to pour the first cup of Cooler to see 125 ml in the paper cup. Pour others to this level.

LITER GUESS GAME

Purpose: Comparison--more than or less than a liter
Players: 2 to 4
Materials: 20 word cards
Game board - pages 12 and 13
Markers

1. Shuffle word cards and place in a pile, description side up.

2. Take top card. Tell whether that container will hold more or less than a liter. Check the answer on the back of the card. If correct, move the number of spaces written on the card. It is then the next player's turn.

3. First one to the ice cream wins.

Word Card List

ladle

one cup of muffin pan

cereal bowl

mop pail

water glass

sandwich bag

kitchen sink

ice cream cone

milk truck

bath tub

can of pop

trash can

restaurant saucepan

aquarium

coffee cup

tablespoon

teaspoon

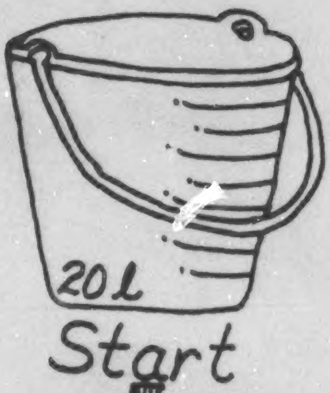
swimming pool

jug of fruit punch

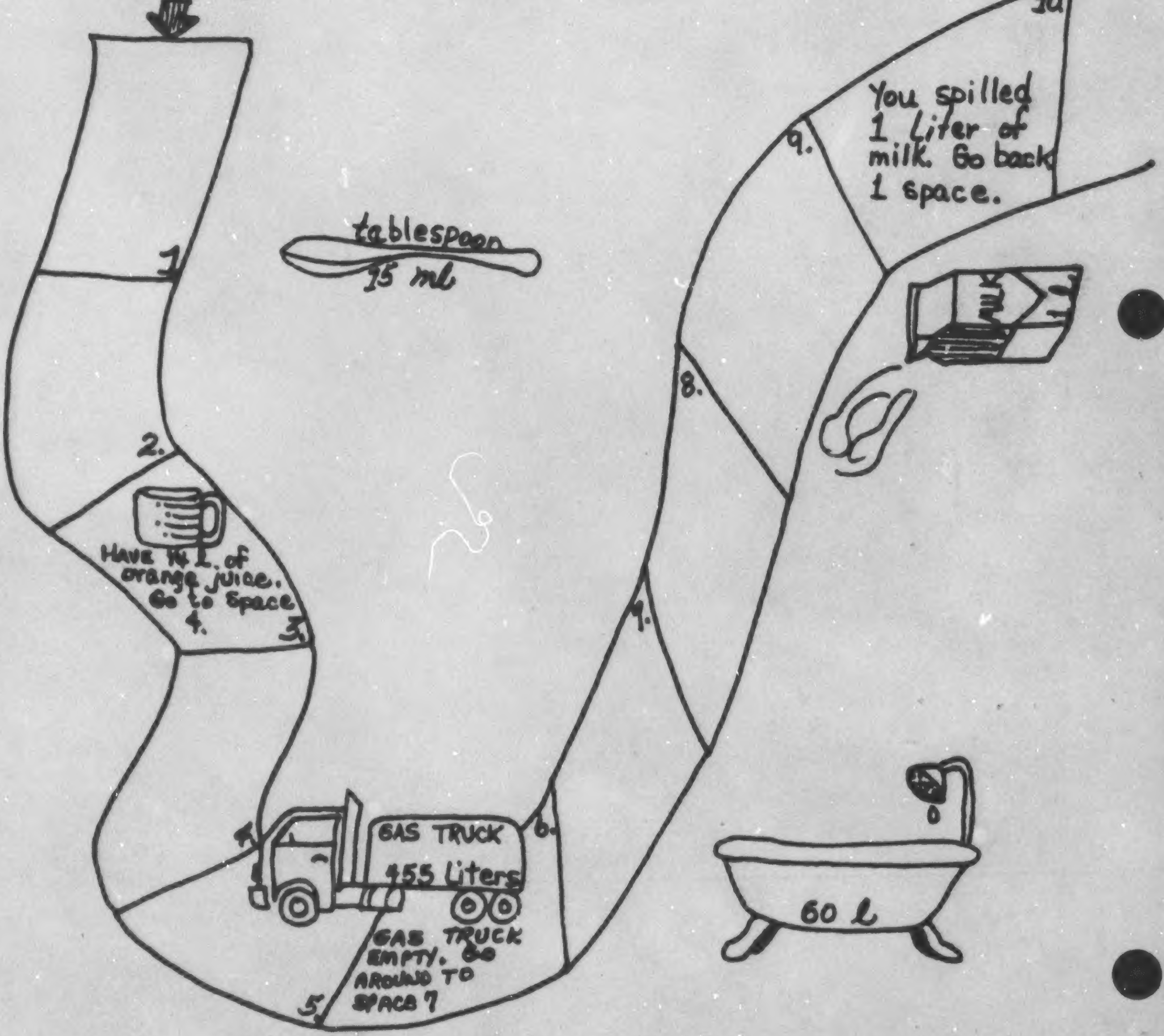
car gas tank

NOTE: Make word cards by cutting 3 x 5 cards in one-half. Write the word on the front. On the back, write "more" or "less" and either 1, 2, or 3 for number of spaces to move.

LITER



1. Shuffle word cards and place in a pile, object side up.
2. Take top card. Tell whether that container will hold more or less than a liter. Check the answer on the back of the card. If correct, move the number of spaces written on the card. It is then the next player's turn.
3. First one to the ice cream wins.


1
2.
HAVE ¼ L of orange juice. Go to Space 4.
3.
4.
GAS TRUCK
455 Liters
GAS TRUCK EMPTY. GO AROUND TO SPACE 7
5.
6.
7.
8.
9.
You spilled 1 Liter of milk. Go back 1 space.
10.
tablespoon
15 ml
60 l

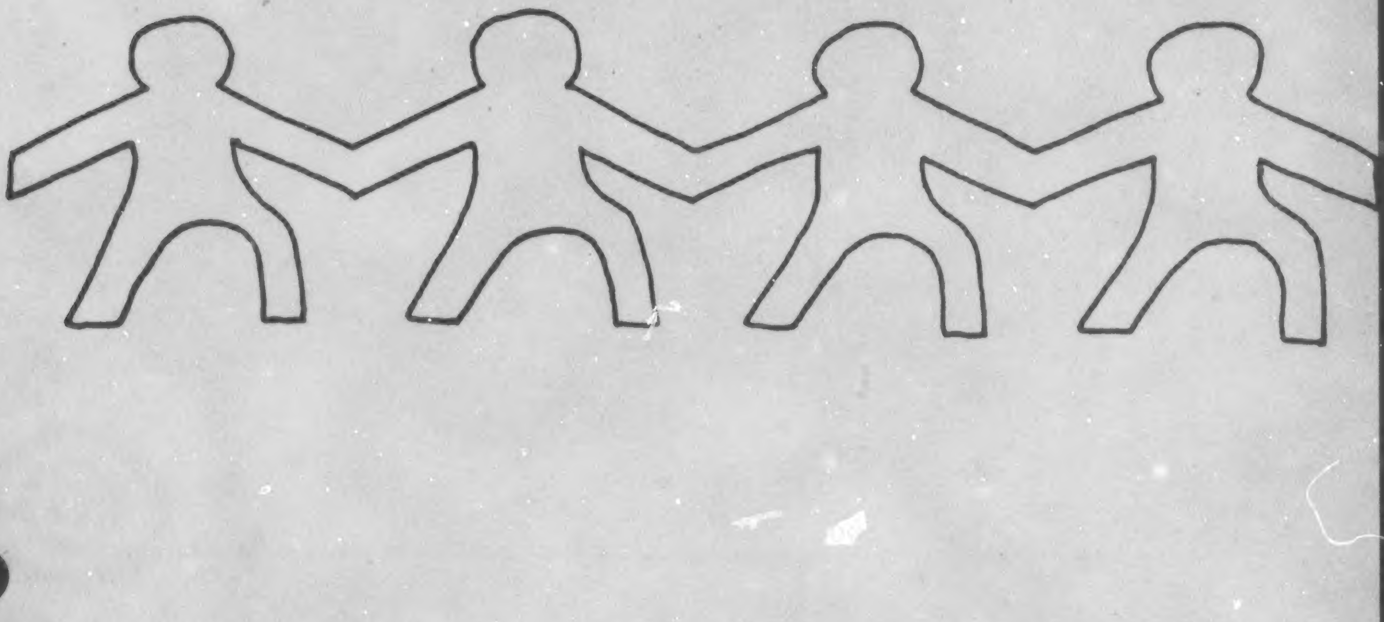
Dear Parent:

As a service project, our class planned and directed metric fun events for young children. This activity provided practice in metric measuring. The events were marked off in meters; ribbons were cut in centimeter lengths; and milliliters and liters were used to make the cookies and punch.

To plan appropriate events, characteristics of a five-year-old were outlined in class. A world of careers require knowledge of children's needs; for example-in the fields of marketing and health occupations. As you observe child-related careers in your community, point these out in your family.

Your child can tell you the type of events held and some of the children's reactions to the events. It was a fun and learning experience for all.

Thank you for your interest in our classroom activities.



RESOURCE SHEET

FOR THE TEACHER:

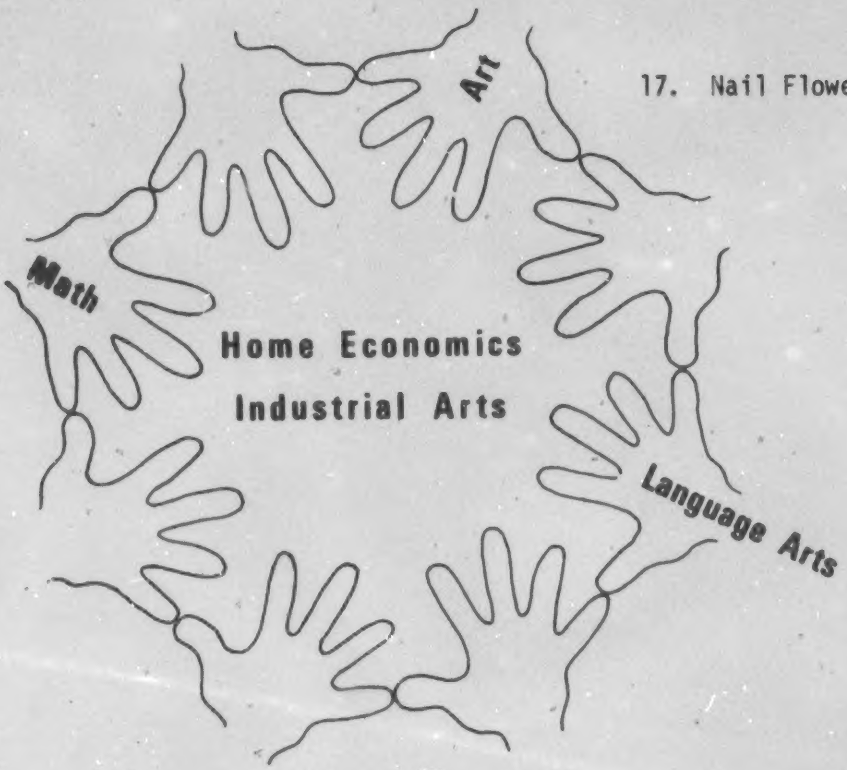
Cincinnati Public Schools. Exploring Careers in Child Care. Bloomington, IL: McKnight Publishing Co., 1970.

Long, Betty and Carol Witte. Metric Fun Activity Cards. Set A: Primary. Manhattan Beach, CA: Teachers, 1974.

Sheperak, Rita and Jerry DeBruin. Touching and Teaching Metrics. Carthage, IL: Good Apple Inc., 1977.

That's a good one..
write it down!

17. Nail Flowers Plaque


Art
Math
Home Economics
Industrial Arts
Language Arts

Hands-on Approach

wichita public schools
wichita, kansas

Activity Based Curriculum for Elementary Education

ACTIVITY BASED CURRICULUM FOR ELEMENTARY EDUCATION

ACTIVITY TITLE:

Nail Flowers Plaque

AREA TITLES AND MAJOR CONCEPTS:

Art
  Arrangement of objects
  Colors

Math
  Geometry-rectangle, circle, center, edge
  Measurement of time - calendar

Language Arts
  Reading and following directions
  Vocabulary
  Reading readiness-development of eye-hand coordination

DESCRIPTION OF ACTIVITY AND ENRICHMENT:

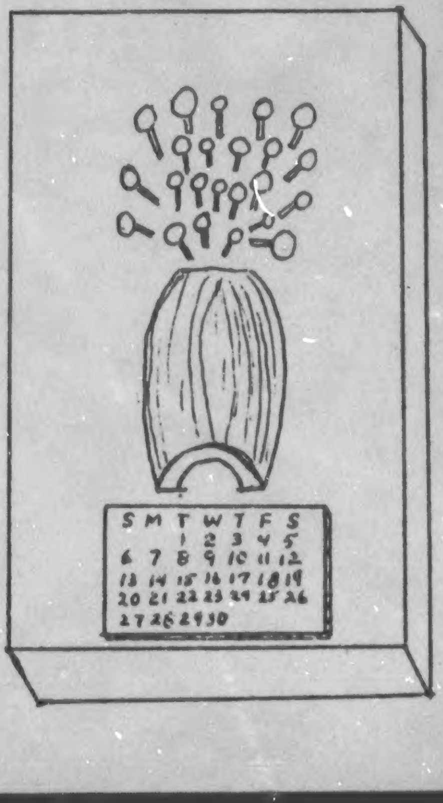
Each student will make a wooden plaque that uses nails in an arrangement as a flower cluster and a large wooden bead as the vase. The nails are hammered in just enough to hold them steady, leaving them extending out from the board for stems. The nail heads are painted in assorted flower colors. A miniature calendar is placed below the vase. The students will saw, sand, hammer, glue, and paint in this activity.

RELATED CAREERS:

Craft Shop Clerk, Forester, Lumber Yard Worker, Recreation Specialist, Designer

REQUIRED FOR THIS ACTIVITY:

The wood is to be precut to 9 cm widths. The large wooden beads are precut in one-half lengthwise for the vase.



EQUIPMENT:

Softwood - 18 cm per plaque (9 cm wide)
Wooden beads - assorted colors (5 cm long) - 1/2 per plaque
Nails - assorted lengths and heads, approximately 20 per plaque
White glue
Pop can tabs (for hangers)
Acrylic paint - assorted colors
Pencils
Sandpaper
Miniature calendar pads
Paper for paint table and glue table
Masking tape
Containers - such as whipped topping tubs for nails

EQUIPMENT:

Hammers
Miter boxes
C-clamps
Crosscut saws
Paint brushes - water colors size
Wooden clamps

ACTIVITY PROCEDURES:

1. Introduce the activity. Show the tools that will be used and have students name them. Show the finished plaque that will be made.
2. Send home Parent Letter (page 6) for permission to work with tools.
3. Set up the room for the activity. Five work tables are needed. See Work Station table sheet and signs on pages 7 to 12.
4. Have class members read the Work Station signs in advance of activity to become acquainted with new words.
5. Discuss safety rules and regulations for the activity and tools.
6. Start just a few students at a time at Station #1. Continue until all the students have completed work at the five stations.
7. The nail heads are painted later in a classroom center with 2 or 3 students working in the center at a time. Demonstrate to the students how to dip the brush in paint and remove the excess paint.
8. After paint is completely dry, glue on calendars.
9. Send home Parent Letter #2 (page 13) to explain activity and enrichment.

FOLLOW UP IDEAS:

Find objects in the classroom that are rectangle shape. List five of them from largest to smallest.

Use the new words from the activity Work Station signs on classroom flash cards. At various times, use the cards at 5 minute oral activity for review.

Use calendars to add interest to learning experiences.

a. Using the current month, have students color the squares different colors so that no two days touching are the same color.
b. Make a puzzle from a large calendar sheet. Laminate the sheet and cut the daily squares in half diagonally. Students are to match correct triangles to make squares and then put them in order.
c. Using old calendars, have students draw as many squares as they see in a given month. Use different colored pencils or crayons to make the various squares.

Make a classroom listing of all the color words that can be used in describing real flowers.

Use leftover nails in a classroom center to be arranged from long to short or sorted in groups by large head and small head; rough and smooth; etc.

Have a carpenter or cabinetmaker visit the class to tell about their work.

Use magazines to find pictures of things that are reminders of the current month.

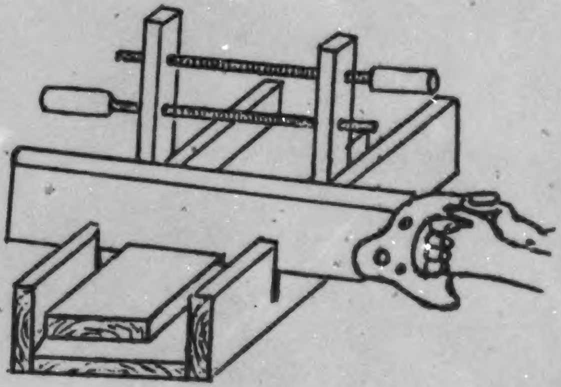
EVALUATION:

Write a story dictated by students on a large chart or on the blackboard titled: *How To Make A Nail Flower Picture.*

This story should be in student terms and descriptions after they have completed the activity. It will give the students an opportunity to use new vocabulary, put in order the steps followed, and think back over the things they enjoyed.

HEALTH AND SAFETY PROCEDURES:

1. Always wear safety glasses when using power or hand tools.
2. Be sure the miter boxes are clamped tightly to the table top.
3. Beware of saw teeth. They are sharp! Watch placement of left thumb on miter box while sawing. Have younger students saw with both hands on the saw handle. This prevents cuts and makes sawing easier.
4. Keep nails out of your mouth.
5. Place the sanding table near ventilation.
6. Swinging a hammer carelessly could hurt someone close by.
7. Keep nails and other supplies picked up off the floor.
8. Make sure every student has permission from home to work with tools.



Jotting Space

TIPS TO THE TEACHER:

1. Make Work Station signs from poster board and laminate to make them reusable (pages 8 to 12). Make 3 actual material models of the following steps: #2 hanger nailed on back, #4 nail flowers arranged in a cluster at top of wood, and #5 vase glued under flowers. Attach each model on appropriate Work Station sign.

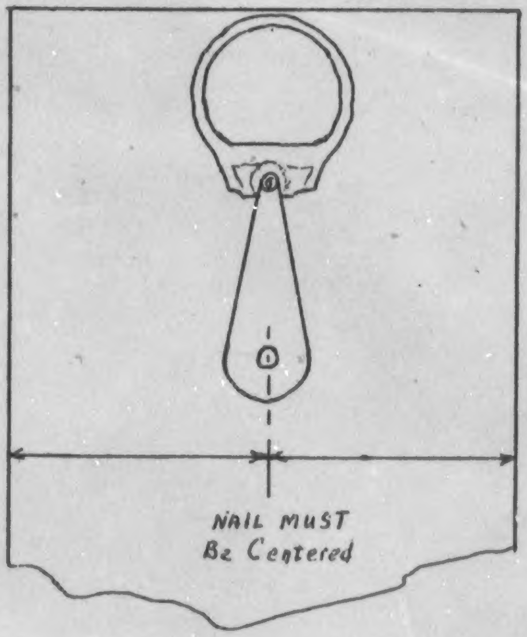
2. Ask parent volunteers to work at Work Stations #1, #2, and #4. Instruct the volunteers to give directions and encouragement, enforce safety actions, and help the child that is having difficulty, without doing the work for them.

3. Nail a stop in the miter boxes for students to saw boards 18 cm long. Using a wooden clamp to secure the wood to be sawed in the miter box will make sawing easier. Also instruct students to use longer, steady strokes instead of short choppy ones.

4. Lay sheets of sandpaper on table top and tape with masking tape. Students will sand edges by pushing the wood over the sandpaper. This station can be used at any time during the activity.

5. Make a starter hole for the nail in the solid part of the pop can tab with a large nail. Hammer the large nail just until it breaks the surface of the metal. Place the top edge of the ring even with the top back edge of the plaque. Center tab between side edges. Place small nail in starter hole and hammer in.

6. The beads should be precut since they are made from hardwood.



Dear Parent:

As part of our ABC/EE program your child will have the opportunity to participate in hands-on projects in Language Arts, Math, Social Studies, and Science. Your child may be working with basic hand tools, small electrical appliances and tools, wood burners, carving tools, and/or sewing machines.

We will demonstrate equipment and take all precautions for their safety. You may also help by talking with your child about safety in use of tools.

In order for us to have an awareness that you do have a knowledge of your child's activities, we must have your consent before allowing your child to use any equipment.

The attached permission slip must be signed in order for your child to participate in our activities.

You are welcome to visit our classroom at any time during ABC/EE activities. Please feel free to ask any questions concerning this program.

I give my permission for ______________________________ to use the equipment and tools in the classroom ABC/EE activities.

____
(Parent or Guardian)

____
(Date)

NAIL FLOWERS WORK STATIONS

	Tables	Equipment and Supplies
1.	Saw the board	Wood (precut 9.5 cm wide) 2 miter boxes fasten with C-clamps 2 wooden clamps 2 crosscut saws *Nail 'stop' in miter box to saw boards 18 cm long
2.	Put your name and a hanger on the back	Pencils Large long nail for starter hole Hammer Pop can tabs Small short nails or tacks
3.	Sand the edges	Sandpaper taped to the table
4.	Nail flowers at the top	Containers of assorted nails Hammers
5.	Glue the vase under the flowers	White glue Wooden beads cut in half Paper to cover table

I

Saw the

board.

2

Put your name and a hanger on the back.

3

Sand the edges.

4

Nail flowers

at the top.

5

Glue the vase under the flowers.

Dear Parent:

Our class made Nail Flowers Plaques as an activity to combine art, math, and language arts. Each student sawed, hammered, sanded, and painted their own nail flowers picture.

New words were learned by reading the directions at each work table. Using a hammer and nails helps develop eye-hand coordination, an important development in learning to read.

The plaque provided an opportunity to work with different materials and shapes. Using a calendar is also an important part of our classwork this year.

Your child will enjoy telling you about our activity.

Experiences in reading, developing eye-hand coordination, and using a calendar at home are very beneficial to your child. Even more important will be the good feelings from doing things together.

Thank you for your interest in your child's classroom work.

RESOURCE SHEET

FOR THE TEACHER:

Grimm, Gary and Don Mitchell. The Good Apple Math Book. Carthage, IL: Good Apple, 1977. (Box 299)

Kaplan, Sandra Nina and others. A Young Child Experiences; Activities For Teaching and Learning. Pacific Palisades, CA: Goodyear Publishing Co., Inc., 1975.

Lorton, Mary Baratta. Workjobs Activity, Centered Learning For Early Childhood Education. Rolling Meadows, IL: Addison-Wesley Publishing Co., 1972. (1843 Hicks Rd.)

McElrath, Tom. "Calendar Capers." Good Apple Newspaper. Issue 25, April, 1978.

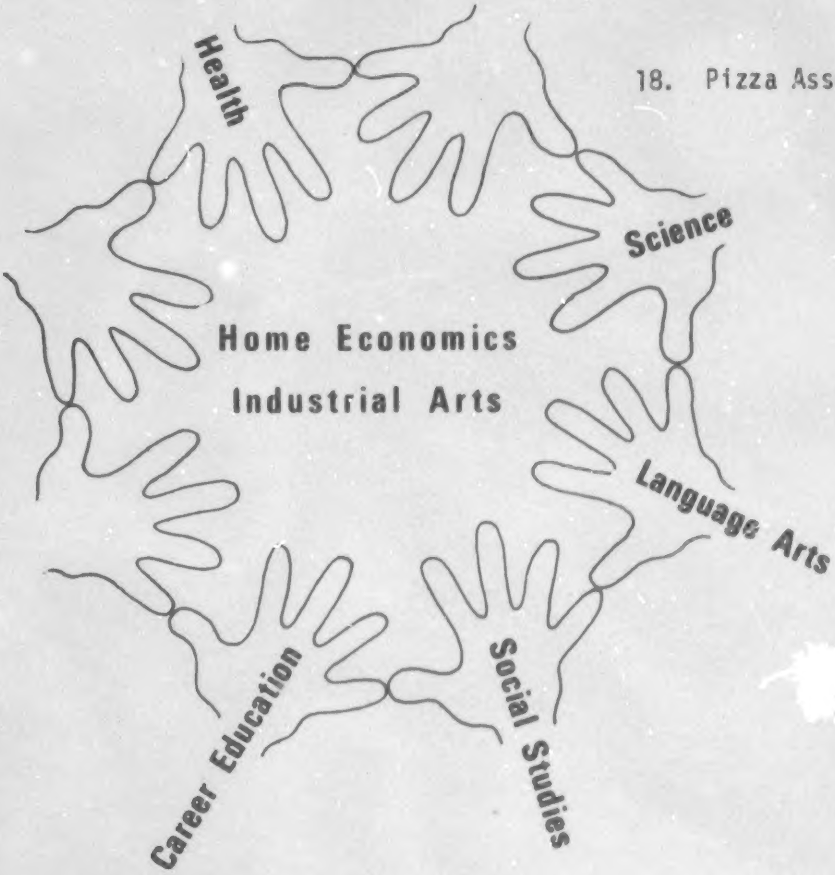
JOT IT DOWN!

FOR THE STUDENT:

Greene, Carla. I Want To Be A Carpenter. Chicago: Children's Press, 1959.

The Little Carpenter. New Britain, CN: Stanley Tools, 1969.

18. Pizza Assembly Line


Health
Science
Home Economics
Industrial Arts
Language Arts
Social Studies
Career Education

Hands-on Approach

wichita public schools
wichita, kansas

Activity Based Curriculum for Elementary Education

ACTIVITY BASED CURRICULUM FOR ELEMENTARY EDUCATION

ACTIVITY TITLE:

Pizza Assembly Line

AREA TITLE AND MAJOR CONCEPTS:

Health
  Basic Four Food Groups

Language Art
  Vocabulary of economics

Science
  Manipulate a variety of objects
  Sensory development

Social Studies
  Assembly line production

DESCRIPTION OF ACTIVITY AND ENRICHMENT:

An assembly - line production will be set up in the classroom to produce individual pizzas using canned refrigerator biscuits for the crust. The pizzas have an ingredient from each of the Basic Four Food Groups.

RELATED CAREERS:

Dietician, Industrial Engineer, Baker, Grocer, Truck Driver, Restaurant Operator, Food Proccessing Technician.

SUPPLIES:

Canned refrigerator biscuits - 3 cans
Mozzarella cheese - 4 oz (113 g)
Aluminum foil
Weiners - 8
Tomato paste - 6 oz (170 g)
Dried Oregano and Basil Flakes - 1/2 tsp each
Salt - 1/2 tsp
Other toppings, if desired

EQUIPMENT:

Table knives (3)
Rubber scraper
Teaspoons (3)
Chopping boards (2)
Cookie sheets and/or flat baking pans
Oven
Trays (2 small)
Oven Mitts
Mixing bowl for sauce
Measuring spoon - 1/2 tsp
Can opener
Bowl for weiner slices (2)
Metric measuring cup

CLEAN UP CENTER:

Plastic dish pans, dish drainer, and tray
Tea towels
Dish soap
Liquid bleach
Disposable dish cloth (cut in 1/4's)
Paper towels for hands

REQUIRED FOR THIS ACTIVITY:

The SAUCE should be premixed and refrigerated until ready to start production. This sauce will be thicker than usual so as not to run off the individual pizzas.

Mix together: one can tomato paste, 50 ml water, and 1/2 tsp each of dried oregano, sweet basil flakes, and salt. (One-fourth tsp garlic salt may be added, if desired).

ACTIVITY PROCEDURES:

1. Introduce assembly line, manufacturing, and/or economic studies

2. Set up 9 Work Stations in the classroom pizza factory.
    a. Use Work Stations Sheets (pages 7 to 11).
    b. Mix sauce and refrigerate (page 2).
    c. Cut 30 aluminum foil squares (10 cm x 10 cm) to pass the pizzas on along the assembly line.

3. Discuss safety on the job (knives; ovens; staying in assigned area; etc.).

4. Have each student give their choice of meat or cheese pizza.

    Make a large classroom bar graph showing "demand" for each. How many will be manufactured ("supply") of each?

5. Assign groups of 3 workers to each station. Tell the students that they are now factory workers. Have each group read their Work Station directions before starting.

6. Start production. Be sure workers in Work Station #4 know the number of cheese and the number of meat pizzas to make. Have each group clean up their equipment and area as they finish on the assembly line.

7. Try out the finished product. Encourage positive verbal responses on product and production process.

8. What Basic Four Food Groups are included in the Weiner Pizza? In the Cheese Pizza? Have the students name the food and the group with reinforcements from the teacher by saying, *"Yes, the crust is in the bread and cereal group," etc.*

9. Send home Parent Letter (page 12).

10. Relate activity to the industrial world and economical vocabulary appropriate for this class level.

    How did it feel to be part of an assembly line:
    What would happen if someone didn't do their job?
    Examples of related economic vocabulary are: producer, product, wages, consumer, profit, labor, expenses, mark-up, selling price.

FOLLOW UP IDEAS:

Mass produce pizzas for another class. Was the production quicker the second time? Why? Relate to mass production.

Figure the cost of each meat pizza and each cheese pizza. How much should be charged for each pizza if they were frozen and sold in a grocery? Did you allow enough to pay the factory workers, grocer, etc.?

Plan a field trip to an industry that uses assembly line production.

Explore the field of cheese processing, origins of various cheeses, and some of the differences in cheeses. On a globe find where some of the cheeses originated.

Use larger pizzas to cut into fractions for 1/2, 1/4, 1/8, 1/16 and 1/3, 1/6, 1/12. After tasting their fraction have students draw and label paper pizzas they have "cut" into fractions.

Make a classroom collage of products made on an assembly line. Use magazines, catalogs or student drawings.

EVALUATION:

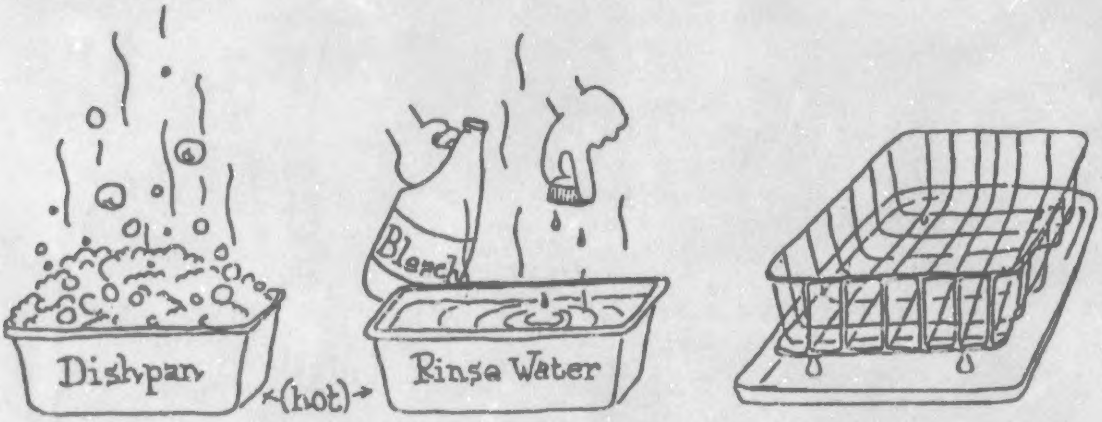
Give the following situation.

You own a factory. Give the name of what you make in your factory. Draw some pictures of your product being made.

Do the pictures illustrate the assembly line concept being used? Has the student thought of an item that is mass produced?

HEALTH AND SAFETY PROCEDURES:

1. Wash hands before handling food.
2. Make sure that all work surfaces are clean.
3. Each worker should stay in assigned work stations during production.
4. Use dry pot holders when pans are too hot to touch.
5. Have the children slice the weiners crosswise with table knives. Stress care in handling any knife and grater. Use a chopping board to cut down on.
6. Be careful not to touch the sides of the broiler oven; it will get hot.
7. Be sure to turn off and unplug appliances when finished.
8. Do not handle electrical appliances with wet hands.
9. Have only small groups of students watching or using the oven or hot plate at one time to prevent accidents.
10. Wipe up spills immediately to prevent falls.
11. Clean Up Station



Cut disposable dish cloths in half.

Have tea towels available for drying the dishes when air drying in the drainer is not possible.

Add one capful of liquid bleach to the rinse water for sterilization of the dishes.

Clean up is part of the activity and should be planned with the class.

Carry clean, warm water in recycled plastic jugs to the clean-up station.

TIPS TO THE TEACHER:

(Write down pointers that would be helpful to you if you conducted this activity next year. Make notes as adventures progress).

1. Other ingredients could be added for topping, increasing the work stations.

2. In planning the flow for the assembly line remember that the oven must be close to an electrical outlet.

3. The supply and demand principal can be expanded by offering more than the two choices for pizza toppings and then producing only the two top choices.

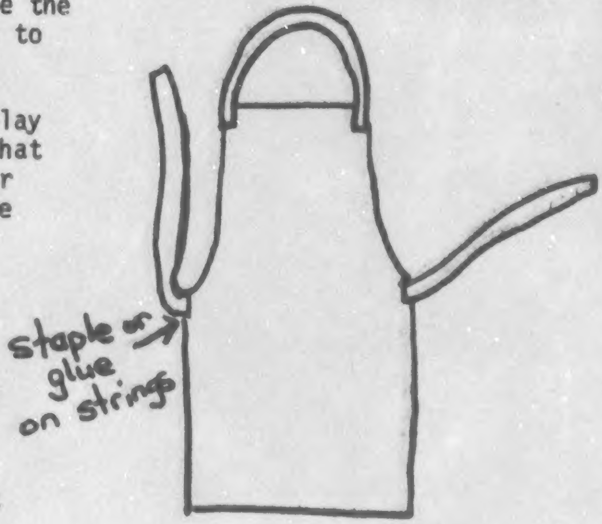
4. Laminate Work Station Sheets or cover with transparent "contact" plastic to make them reusable.

5. Start the oven preheating when the production of pizzas start.

6. Before placing pans of pizzas in the oven, be sure aluminum foil edges are not overlapping over the top of another pizza. They will not bake or brown properly if covered.

7. Have students make white crepe paper aprons to wear in the pizza factory. To determine length of apron, measure the distance on one student from armpits to knees.

   With an apron on, each student can play the role of pizza chef. Emphasize that proper clothing is very important for some jobs. Discuss jobs that require special uniforms or dress.


staple or glue on strings

8. Set up a clean-up station. After each group finishes their job on the assembly line, they are to wash their equipment and table. Allow one group at a time at the clean-up center.

9. Recycled plastic jugs are convenient for carrying water to the clean-up station.

Pizza Assembly Line

Work Station Flow Sheet

1. Slicers - slice weiners.
2. Shapers - flatten biscuits for crust.
3. Spreaders - spread on pizza sauce.
4. Assemblers - put on weiner slices.
5. Toppers - sprinkle on cheese.
6. Inspectors - place pizzas on cookie sheets.
7. Bakers - put pizzas in oven and watch time.
8. Packers - put pizzas on trays for serving.

WORK STATION #1

Slicers

1. Lay a weiner on a cutting board and make thin crosswise slices.
2. When 1/2 of the weiners are sliced, take the bowl of slices to Station #4.
3. Finish slicing weiners and take to meat station.

Needed:

weiners
table knives
chopping boards
bowls (2)

WORK STATION #2

Shapers

1. Place biscuit on foil square.
2. Flatten biscuit with hand.
3. Pass to Station #3.

Needed:

canned biscuits
aluminum foil squares

WORK STATION #3

Spreaders

1. Put on a small spoon of sauce.
2. Spread sauce with back of spoon.
3. Pass pizza to Station #4.

Needed:

pizza sauce mixture
teaspoons

WORK STATION #4

Assemblers

1. Find the number of meat pizzas needed.
2. Put 3 slices of weiner on each meat pizza and gently push down.
3. Count pizzas as putting on meat.
4. Pass to Station #5.

WORK STATION #5

Toppers

1. With fingers, sprinkle on some cheese.
2. Pass to station #6.

Needed:

grated mozzarella cheese

WORK STATION #6

Inspectors

1. Inspect each pizza to be sure it is made right.
2. Put pizzas onto pan, leaving on foil squares. Do not overlap any foil over a pizza.
3. Take to Station #7.

Needed:

cookie sheets or flat baking pans

WORK STATION #7

Bakers

1. Bake pizzas at 450°F (230°C).
2. Bake for 7 minutes or until light brown. Ask your teacher to remove the pans from the oven.
3. Take to Station #8.

Needed:

oven
oven mitts
timer or room clock

WORK STATION #8

Packers

1. Cool slightly and take pizzas off foil.
2. Place pizzas on tray.
3. Serve pizzas.

Needed:

trays
oven mitts

WORK STATION #9

Clean-Up

1. Wash the dishes you used.
2. Put them in the drainer
3. Wipe off your work station table.

Dear Parent:

As an activity for health, social studies, and language arts, our class mass-produced individual pizzas. Each class member had a job on our assembly line. Assembly line workers are very important in our modern world.

Ask your child to tell about their classroom pizza factory.

For a fun and learning project, set up a family mini-assembly line. Produce main dishes, snacks, or individual desserts for entertaining or family meals. Pizzas, tacos, and cupcakes are just a few of many foods that could be "mass produced."

Pizza is nutritional. A meat pizza has at least one food from all of the Basic Four Food Groups. Below are two economical Pizza Sauces that can be used for those homemade creations.

PIZZA SAUCE

Enough for 2 to 3 large pizzas

Combine:
- 8 oz. (226 g) can tomato sauce
- 10 oz. (283 g) can tomato soup
- 1 tsp. worcestershire sauce
- 1/2 tsp. garlic salt
- 1 tsp. dried oregano
- 1 tsp. basil flakes

PIZZA SAUCE

For individual pizzas from canned biscuits or English muffins

Combine:
- 6 oz. (170 g) can tomato paste
- 1/4 cup water (50 ml)
- 1/2 tsp. dried oregano
- 1/2 tsp. sweet basil flakes
- 1/2 tsp. salt
- 1/4 tsp. garlic salt

*This is the recipe we used in class.

RESOURCE SHEET

FOR THE TEACHER:

Cook, Ann. *What's Cooking*. Los Angeles: Bowmar, 1976. Teachers guide and elementary level laminated recipe sheets.

Hallum, Rosemary. "Early Education Workshops -- A Pizza Party" *Teacher*. January, 1978, page 114.

Johnson, Georgia and Gail Povey. *Metric Milk Shakes and Witches Cakes: Cooking Centers in Primary Classrooms*. New York: Citation Press, 1976.

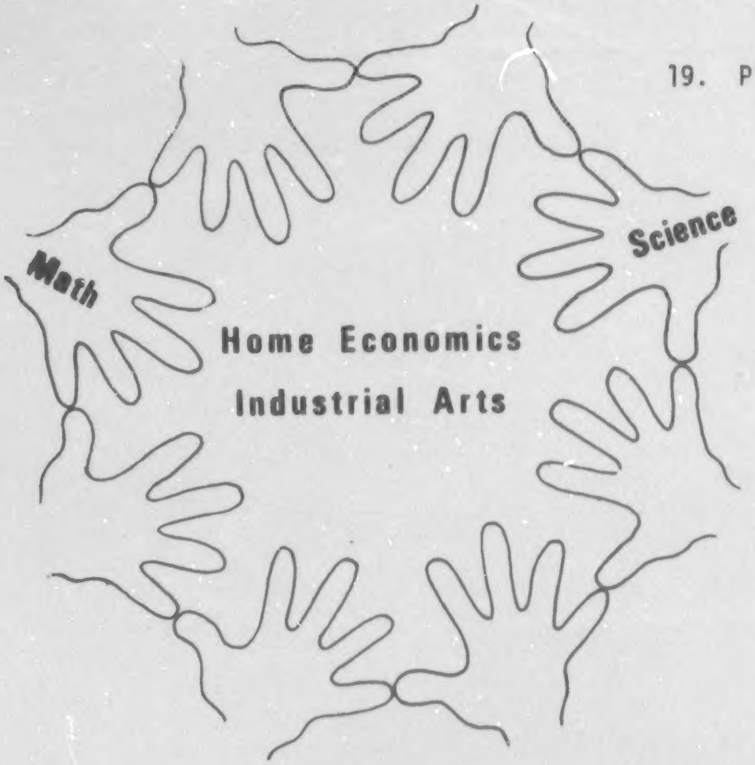
McClenahan, Pat and Ida Jaqua. *Cool Cooking For Kids*. Belmont, CA: Fearon Publishers, Inc., 1976.

FOR THE STUDENT:

Armstrong, Louise. *How To Turn Lemons Into Money, A Child's Guide To Economics*. New York: Harcourt Brace Jovanovich, 1976.

That's a good one..
write it down!

19. Planter Box


Math
Science
Home Economics
Industrial Arts

Hands-on Approach

wichita public schools
wichita, kansas

Activity Based Curriculum for Elementary Education

ACTIVITY BASED CURRICULUM FOR ELEMENTARY EDUCATION

ACTIVITY TITLE:

Planter Box

AREA TITLES AND MAJOR CONCEPTS:

Math
  Metric linear measurement

Science
  Plant life and structure
  Seeds
  Soil

DESCRIPTION OF ACTIVITY AND ENRICHMENT:

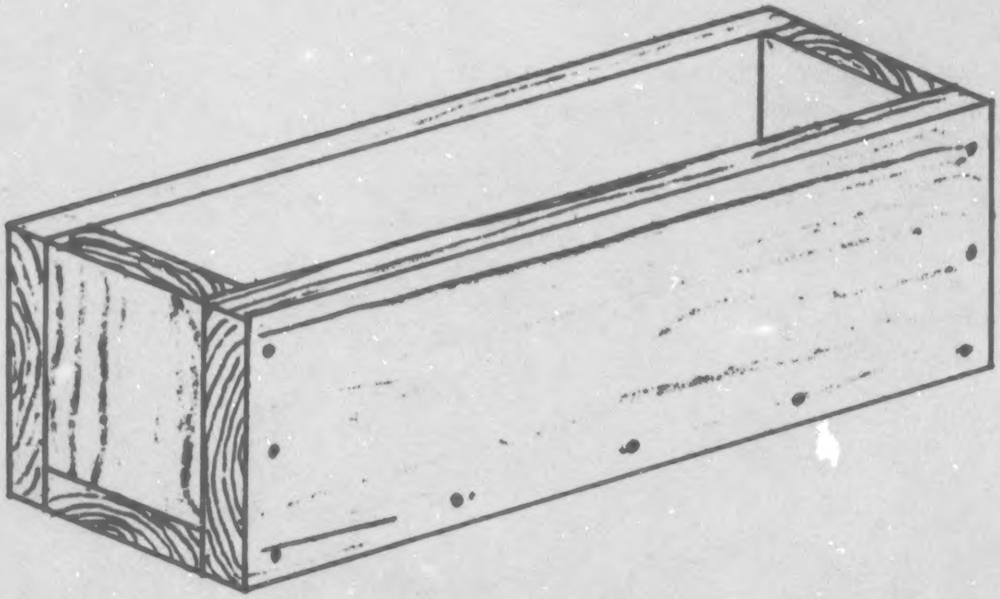
Each student will measure the wood and construct a rectangle, cedar planter box. This can be used as an outside planter. Seeds or starter plants will be planted in the box to provide experiences in plant life.

RELATED CAREERS:

Botanist, Carpenter, County Agricultural Agent, Farmer, Forester, Horticulturist, Soil Scientist.

REQUIRED FOR THIS ACTIVITY:

The wood is precut to 9 cm widths.



SUPPLIES:

Fencing cedar - per box - 106 cm (9 cm wide)
Finish nails - 3 cm, small gauge - 18 per flower box
Pencils
Marking jig for nail location (page 5)

EQUIPMENT:

Miter boxes
Hammers
Crosscut saws
Nail set
Centimeter rulers
Electric or hand drill
Try-squares
Drill press or wooden drilling base on table top
C-clamps

ACTIVITY PROCEDURES:

1. Introduce plant study and activity.
2. Send home Parent Letter for permission to use tools (page 7).
3. Set up work stations in the room needed to make the planter. Precut wood. Suggested work stations are outlined on page 8.
4. Have students read the steps in Student Activity Sheets (pages 9 and 10) in advance of the activity.
5. Discuss safety rules and regulations.
6. Start a few students at a time at Station #1. Have the students place a checkmark by each step on the Student Activity Sheets (page 9 and 10) as completed.
7. Have the students fill the planters with a shallow layer of stones or sand before adding soil. Plant seeds or transplant starter plants. Discuss care of plants.
8. Send home Parent Letter #2 to describe activity and enrichment (page 11).

FOLLOW UP IDEAS:

Have students compare costs of a plant started at different stages; with a seed or cutting, a small transplant, and a large plant. What are other factors besides cost that would be considered in the type of plant to acquire?

Have students print plant name and care tags to go with their planter box.

In a classroom center, have a variety of objects to be measured in centimeters and/or millimeters. Some good items would be stamps, computer cards, maps, blueprints, envelopes, yarn pieces, and different sizes of newspaper or magazine advertisements.

Make a classroom listing of things we use that come from plants.

Have students record data about the care and appearance of plants in their planter box, such as growth in centimeters per week, new leaves, frequency of watering.

Assign special reports on woods and the wood industry. The planter is made from a plant for plants.

For another experience with plants, have students build terrariums with a wide-mouth jar. Cover the bottom with 2.5 cm of sand. Sprinkle in 5 cm of soil mixture. Insert a cactus, African violet, or fern in a hole made in the soil and pat soil around plant. Use colorful stones on top of the soil. Spray each plant with water. Cover with plastic wrap and fasten on. They will not need watering for about three months.

Soybeans and mung beans sprout easily. They can be bought at a health food store. Lentils may also be used for sprouting. Weigh the beans and record the weight. To conduct a sprouting lesson:

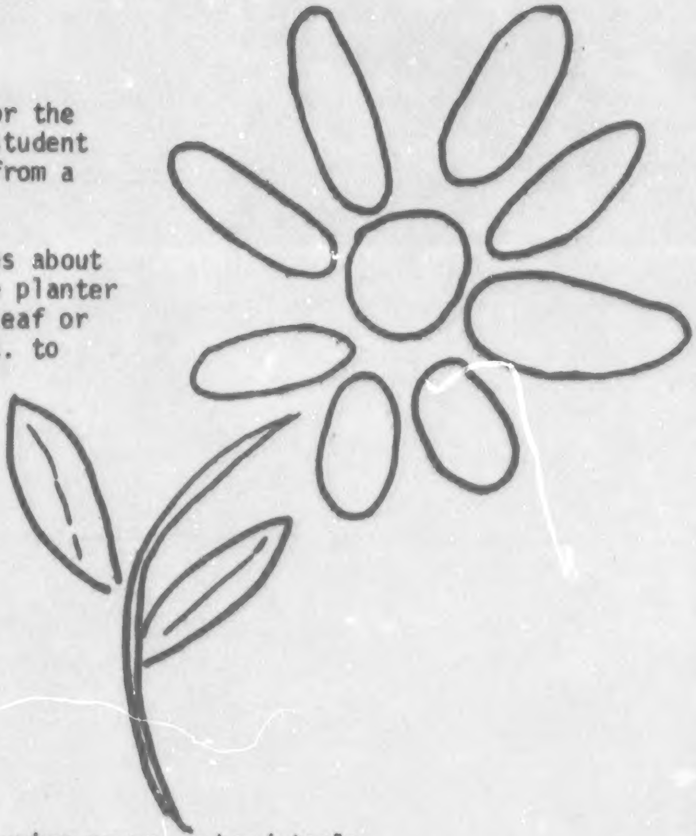
> Sprinkle a single layer of beans in 2 large jars, cover with water and soak overnight. Place a cheesecloth over the top of the jar, and secure with a rubberband. Drain the water off the seeds through the cheesecloth. Two times a day, rinse the beans with cool water through the cheesecloth, and keep stored in a warm dimly, lighted place. Lay the jar on its side. In a week, the beans will have sprouted. Observe changes daily--changes in size, hardness or softness, color, new shoots. A magnifying glass would be beneficial in the daily observations. Weigh them again. Let the students taste the sprouts from one of the jars, and use the other jar to watch them continue to grow. Bean sprouts are a nutritional food since seeds contain all the nutrients needed by a baby plant. Use them raw in salads or in cooking. For an interesting jungle effect, use a variety of seeds from a health food store, in addition to the beans, such as alfalfa seeds, barley, and wheat berries.

Plant some narcissus bulbs. Use solar energy by making aluminum foil reflectors from aluminum pie pans to speed the growth of some of the plants. Compare growth to ones without reflectors.

EVALUATION

Make large flowers or a vine for the bulletin board by having each student cut an original leaf or petal from a sheet of construction paper.

Instruct them to write sentences about what they learned in making the planter box and about plants on their leaf or petal. Connect with stems, etc. to complete the bulletin board.



HEALTH AND SAFETY PROCEDURES:

1. Always wear safety glasses when using power or hand tools.
2. Beware of saw teeth. They are sharp.
3. Keep nails out of your mouth.
4. Be sure the miter box is clamped tightly to the table top. Sawing slowly with long steady strokes provides an easier cut.
5. Tighten chuck securely on drill before operating. Disconnect from outlet to put in bit.
6. Turn side-cutting pliers away from face when snipping off top of nail to make drill bit.
7. Make sure every student has permission from home to work with tools.

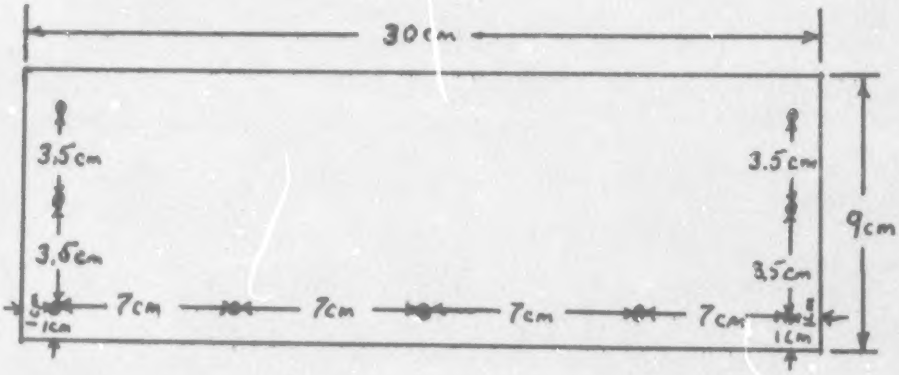
That's a good one..
write it down!

TIPS TO THE TEACHER:

1. Rough cedar, fencing scraps can often be obtained from a fencing project since it comes in 8 foot lengths and most fences are 6 feet high.
2. Tell the students that in marking the boards to use a sharp pencil for fine lines.
3. Encourage accuracy when measuring and marking parts.
4. Plants or seeds should be started in the boxes before they are taken home.
5. Have the students select the two best 30 cm pieces for the sides. The bottom will not be seen.
6. Make a marking jig to mark placement of nails on the side pieces.

Making the jig:

a. Use one regular size side piece.
b. Mark as below:



c. Use same size finish nail as you will use in box construction.
d. Cut head off the nail and put nail in the drill.
e. Drill holes clear through the wood where marked.
(CAUTION: MAKE SURE YOU DRILL THESE HOLES STRAIGHT).
f. After the holes are all drilled, place a nail in each hole.
g. With the board flat on the table, push the nails so they stop on the table.

Using the jig:

a. Place jig on top of box side and square it.
b. Tap LIGHTLY each nail into box side.
(CAUTION: TAP JUST ENOUGH TO MARK THE GOOD BOARD).
c. Remove jig.
d. Place jig down on wood scrap to push nails back up into the wood.
e. Repeat on second box side.

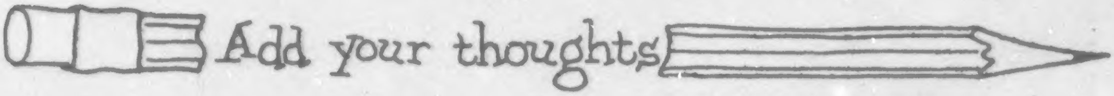
TIPS TO THE TEACHER: Continued

7. If fencing cedar is used, make sure all rough sides are turned out; top edges are also rough. The inside of the planter should be smooth.

8. Lay sides on scrap wood for drilling if drill press is not used.

9. Demonstrate to the class and/or small groups the techniques in using special equipment such as marking jig, nail set, drill, and a try-square to square corners and mark lines.

10. Make a drill bit from the same size nail as used for the box. Snip off the top of the nail for a good fit in the drill jaws.



ACTIVITY BASED CURRICULUM FOR ELEMENTARY EDUCATION

Dear Parent:

As part of our ABC/EE program your child will have the opportunity to participate in hands-on projects in Language Arts, Math, Social Studies, and Science. Your child may be working with basic hand tools, small electrical appliances and tools, wood burners, carving tools, and/or sewing machines.

We will demonstrate equipment and take all precautions for their safety. You may also help by talking with your child about safety in use of tools.

In order for us to have an awareness that you do have a knowledge of your child's activities, we must have your consent before allowing your child to use any equipment.

The attached permission slip must be signed in order for your child to participate in our activities.

You are welcome to visit our classroom at any time during ABC/EE activities. Please feel free to ask any questions concerning this program.

- -

I give my permission for ______________________________ to use the equipment and tools in the classroom ABC/EE activities.

____
(Parent or Guardian)

____
(Date)

Planter Box Work Stations

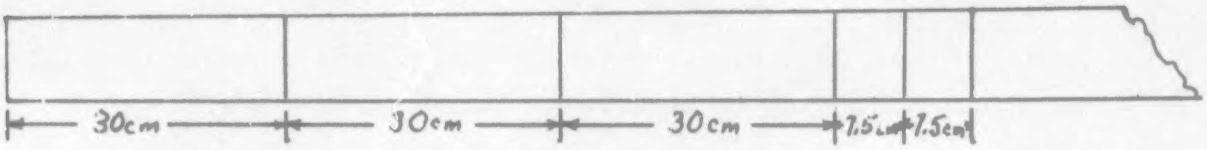
Activity Sheet Steps	Tables	Wood
1.	Measure and Mark	Pencils Centimeter rulers Try squares
2.	Saw	Miter boxes (2) C-clamps Saws (2)
3 and 4.	Name and mark drill holes	Pencils Marking jig Hammer
5.	Drill holes Outlet	Drill Drill press or scrap of wood for table top
6, 7, 8, 9, 10.	Hammer together	Hammers (8) Nails Try square Nail set

Student
activity
sheet

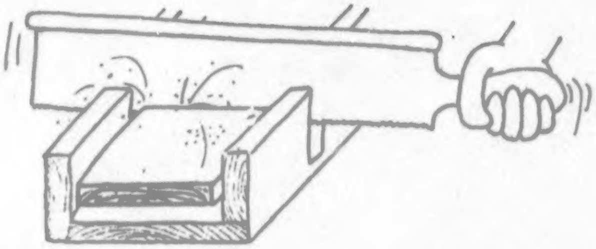
Planter Box

☐ 1. Measure and mark boards as follows:

Use a try square to mark the lines. Check to see if you have the board marked for three 30 cm pieces and two 7.5 pieces.



☐ 2. Place marked wood in a miter box and saw.



☐ 3. Write your name on the side of the pieces that will be in the center of the box. If there is one rough side on your wood, it will be on the outside of your box.

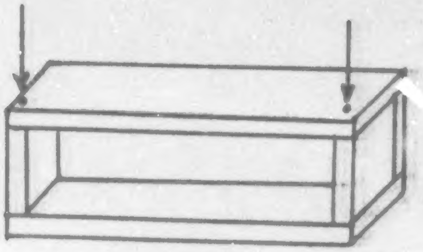
☐ 4. On the two pieces selected for the sides, mark the location for the nails with the *marking jig*. Lay it on top of a side piece and lightly tap each nail.

☐ 5. Drill a hole at each marked point on both sides. Drill straight and completely through the board.

STUDENT ACTIVITY SHEET No. 2

☐ 6. Set box pieces together. Turn box on its side. Nail only the top two corners.

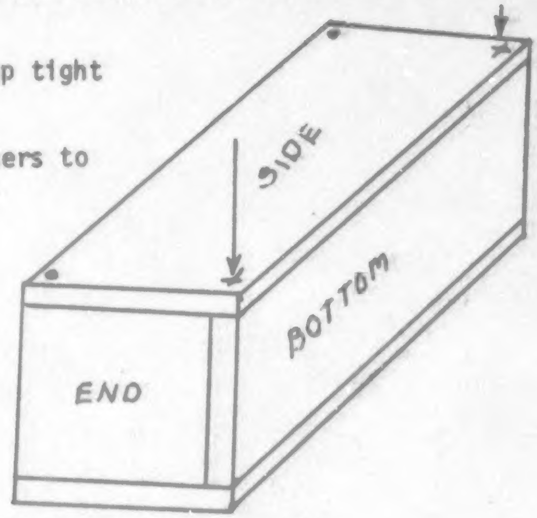
Turn over and nail the other two top corners.



☐ 7. Use a try square to check the corners. Make sure all the corners are square.

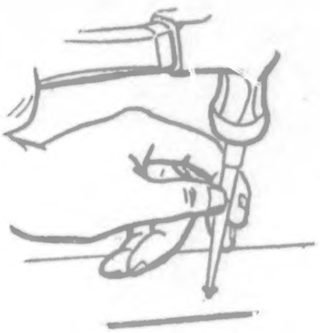
☐ 8. Make sure the bottom is up tight to the ends.

Nail the four bottom corners to hold in the bottom piece.



☐ 9. Hammer a nail at each remaining drilled location.

☐ 10. Use a nail set to countersink the nails.



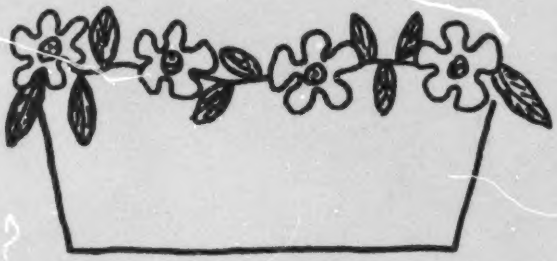
Dear Parent:

As an activity for science and math, each student made a wooden planter box. The pieces for the planter were measured in centimeters. We then filled the planters and have been watching plant growth.

Your child will probably enjoy telling about making and filling the planter.

Home experiences with plants will extend our classroom learnings. Pleasure in watching and observing plant life around you is catching. The important thing is not the amount of information known about plants, but rather the awareness of differences and changes, arousing curiosity, and sharing time with your child.

Thank you for your interest in your child's classwork.



RESOURCE SHEET

FOR THE TEACHER

Environmental Action Coalition. *It's Your Environment, Things To Think About-Things To Do*. New York: Charles Scribner's Sons, 1976.

Forte, Imogene and Joy MacKenzie. *Creative Science Experiences For The Young Child*. Nashville, TN: Incentive Publications, Inc. 1973. (Box 12522)

Skelsey, Alice and Gloria Huckaby. *Growing Up Green*. New York: Workman Publishing Co., 1973.

Wallamore, Elisabeth. *The Metric Book of Amusing Things To Do*. Woodbury, NY: Barron's Educational Series, Inc., 1974. (113 Crossways Park Dr.)

FOR THE STUDENT

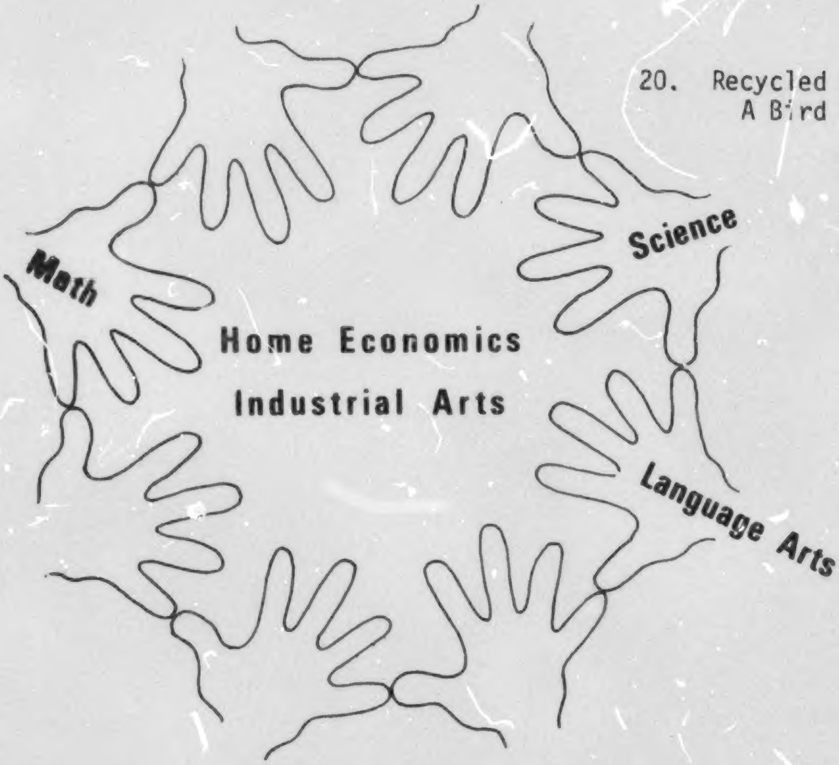
Fink, Ed. *Look Mom, It's Growing*. Countryside Books. Barrington, IL: A.B. Morse Co., 1976.

Gardening - How To Grow Things. Puffin Books. New York: Penquin Books, 1976. (625 Madison Avenue)

Heady, Eleanor B. *The Soil That Feeds Us*. New York: Parents' Magazine Press, 1972.

JOT IT DOWN!

20. Recycled Limb Makes A Bird Feeder


Math
Science
Home Economics
Industrial Arts
Language Arts

Hands-on Approach

wichita public schools
wichita, kansas

Activity Based Curriculum for Elementary Education

ACTIVITY TITLE:

Recycled Limb Makes A Bird Feeder

AREA TITLES AND MAJOR CONCEPTS:

Math
  Metric linear measurement
  Metric volume measurement

Language Arts
  Research
  Recording observations

Science
  Study of Bird Feeding Habits
  Ecology of Wildlife

DESCRIPTION OF ACTIVITY AND ENRICHMENTS:

Each student will make a bird feeder from a stick or tree limb by drilling holes around the log. The holes will be filled with food for the birds, such as peanut butter and birdseed.

RELATED CAREERS:

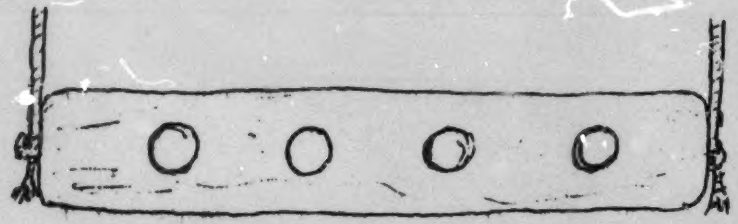
Conservationist, Tree Trimmer, Scientist, Librarian, Wildlife Specialist.

SUPPLIES:

Tree limbs - 4 cm to 6 cm in diameter, each at least 45 cm long
Heavy cord - at least 5 mm in diameter, 160 cm per student
Nails - 2.5 cm large head roofing nails, 2 per feeder
Nails - 3 cm paneling nails, 2 per feeder
Tongue depressors or flat stick
Birdseed - 50 ml each
Peanut butter 907 g jar per class, 25 ml each student
Chalk
Paper cups for mixing - 1 each
Recycled sandwich bread sacks - 1 per student

EQUIPMENT:

Basic wood hand tools - brace and auger bits - either 16/16, 14/16, or 12/16; hammers, crosscut saws, vises, miter boxes, C-clamps
Metric measuring cups
Meter sticks
Scissors



ACTIVITY PROCEDURES:

1. Introduce ecological study of birds: eating habits, difficulty in finding food in the winter time, birds contributions to the balance of nature, etc. Use the library and the Student Resource Sheet (page 6).

2. Send home Parent Letter (page 5). The letter describes the size of branch needed for the bird feeder and has a permission slip to be returned.

3. Set up work stations in the room for the activity.

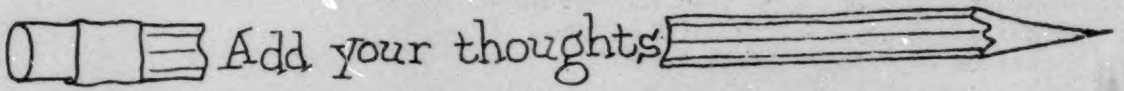
4. Have students read steps in Student Activity Sheets (pages 7-9) in advance of the activity.

5. Discuss safety rules and regulations.

6. Start just a few students at a time at Station #1. Have the students place a check mark by each step on the Student Activity Sheet (pages 7-9) as completed.

7. Students are to take feeders home and use other solid foods to fill the remaining holes. (Or have students fill open holes with various foods brought in by class members).

8. Have students record which foods disappeared the quickest, what kind of birds used their feeder, and other observations while "bird watching." Students are to report the results to the class at various times as the school year progresses. Use the sheet "Recording My Observations" (page 10).



FOLLOW UP IDEAS:

Have students research a local native bird or a favorite bird. They could share their findings with the class by an oral report on notes of interest and pictures or drawings.

Students' favorite bird drawings could be made permanent by making plaques from bakers "clay" (125 ml salt, 500 ml flour, and 175 ml hot water) or yarn stitchery on burlap. (Complete instructions in Getting To Know You Through Art - reference on page 12)

In Sweden, Denmark, and Norway, there are traditions of sharing the Christmas feast with the birds. Explore these customs. The Swedish save a sheaf of grain from the fall threshing to tie onto a pole outside for the birds. In Norway, melted suet and birdseed are formed into blocks, tied onto sticks, and placed outside in the snow. Make bird cakes in class.

To make one large recipe of bread cakes:

1. Cut 1 pound suet into small pieces of skillet. Cover pan and set on LOW heat to melt suet.
2. When all fat is melted and only a few small crisps of suet remain, turn off heat. Let cool for about 25 minutes.
3. Add 250 ml peanut butter, 500 ml birdseed, and cornmeal to suet. Mix together.
4. Spoon mixture into 5-ounce paper cups. Place in refrigerator until firm.
5. When ready to use, peel off paper cup. Leaving whole, put in recycled mesh bag and hang on tree.

Another recipe for suet balls mixes one part flour to three parts of cooking fat. Wrap this in a section of plastic mesh onion bag or potato sack. Tie with string and hang on a tree. Discuss in class the nutritional difference between the above bread cakes and these suet balls. What is the difference in cost?

EVALUATION:

Have students write highlights of activity by completing the evaluation sheet on page 11. There are no right or wrong answers. The paper should be checked for increased awareness and knowledge.

HEALTH AND SAFETY PROCEDURES:

1. Always wear safety glasses when using power or hand tools.
2. Beware of saw teeth. They are sharp. Keep hands off cutting edges.
3. Keep nails out of your mouth.
4. If suet is being melted for bird cakes, use LOW heat and caution that the pan will not be hit. Melted fat can cause serious burns and is highly flammable. When checking to see if suet is melted, do not stand too close to the pan, for hot suet "spits."
5. Swinging a limb or hammer carelessly could hurt someone close by.
6. Be sure limb is tight in the vise before and while drilling holes.

TIPS TO TEACHER:

1. Have students bring their own tree branch.
2. Have an example of a branch as a maximum size and a minimum size.
3. Have some extra branches for those students that can't find branches.
4. Tongue depressors are good for mixing and stuffing birdseed and peanut butter. Small sticks could also be used.
5. Size wood auger bits to age of students.
   a. 16/16 or 1" drill for 6th graders.
   b. 14/16 or 12/16 drill for younger students.
6. Other food for birds include sunflower seeds, bread crumbs, grapefruit and orange rinds, suet, cornmeal, coconut shell with meat inside, dried cob of corn, fat from cooked meat made solid in refrigerator.
7. Other feeders can be made from mesh bags which onions are sacked in; pinecones filled with peanut butter or suet and birdseed; and bleach or milk jugs.
8. Sandwich bread sacks would make good recycled plastic bags for carrying the filled bird feeders home. This would eliminate the filling from dropping out or staining books and clothes.
9. Cleanup is part of the activity and should be planned with the class.

Dear Parent:

In science, language arts, and math, we are studying about birds and ecology. One activity planned is to make a bird feeder.

Each student will need for this feeder a limb about 2 inches in diameter and at least 18 inches long.

This activity will require the use of basic hand woodworking tools. Safety will be stressed in class. Would you also point out safety procedures at home in using tools?

You can also help your child be on the alert for newspaper and magazine articles about birds and ecology.

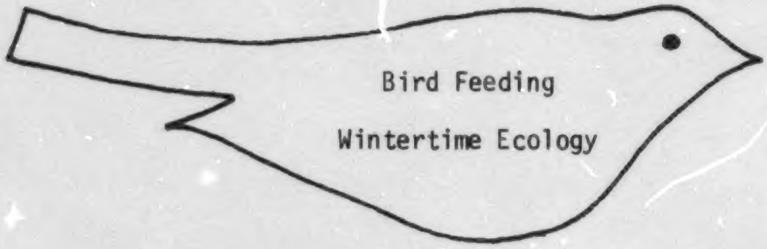
Some birds are suet and fat eaters. To make a simple feeder at home, use a grapefruit rind. After finishing eating a half grapefruit, poke three small holes around the top. Pour into this rind any leftover bacon fat or other melted meat fat. When it is half full, pull a string through the holes and hang over a low branch.

Thank you for helping us with the limbs needed for our class activity. Your child will soon bring home the finished bird feeder to use for the rest of the winter. The students will be recording observations and report back to class.

I give my permission for ______________________________________ to use the equipment and tools in the classroom ABC/EE activities.

____
(Parent or Guardian)

____
(Date)



Bird Feeding

Wintertime Ecology

What would Spring be like without birds?

Birds help us keep the kind of earth we want. They help protect trees and plants by eating harmful insects. An oriole can eat 17 hairy caterpillars in one minute! A house wren feeds 500 insects to its babies in one afternoon! A brown thrasher can eat more than 6,000 insects ine one day! The part that each animal and plant plays in helping others to live is called the balance of nature. Can you think of some other examples of the balance of nature?

Birds help start new plants by spreading seeds. Also another important reason for winter care of birds is the enjoyment people receive from watching and hearing birds. Birds are beautiful. What is your favorite bird?

Many birds have a hard time in winter. There is less food available at this time. One way they prepare for winter is by slowly losing their feathers. This is called molting. The new feathers that grow back are softer and there are more of them. When birds separate their feathers with their beaks, layers of air get between them. This provides insulation from the cold.

Many birds fly to warmer climates to spend the winter. This is called migration. Not all birds migrate. You can help birds live in winter by making a bird feeder. Things to remember in bird feeding:

*Most birds like subdued nature colors such as brown, green, or grey.

*Be patient after you put up your feeder. It may take time for the birds to discover your treat.

*Keep food in the feeder all the time until spring so the birds that feed there can depend upon that food source.

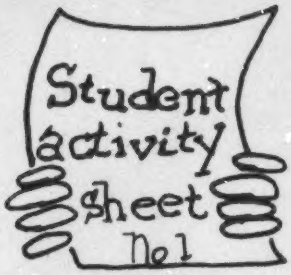
*Do not use metal for bird feeders. In cold, wet weather the birds feet may stick.

*Some birds like to perch close to their food source.

*Feed the birds cafeteria style - use more than one type of food in your feeder. What are some recycled foods you can use? Experiment!

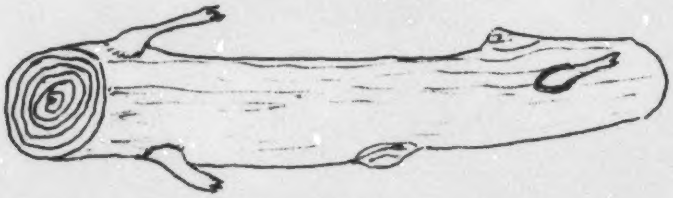
*Different birds feed at different levels.

*You may use a variety of feeders such as milk carton, mesh onion sack, stuffed pine cone, dried rind of grapefruit half, or holes in a log. What are some others?

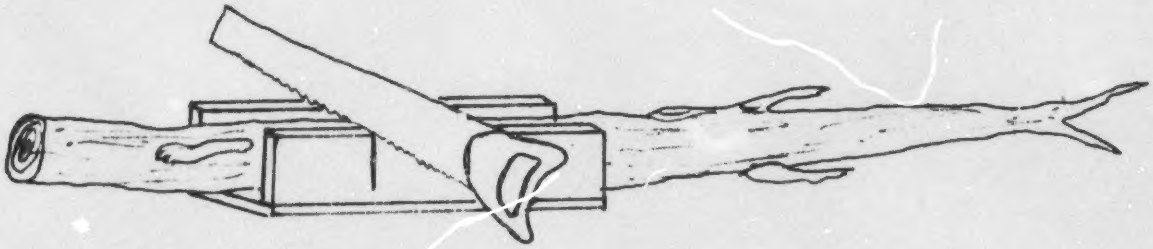


BIRD FEEDER

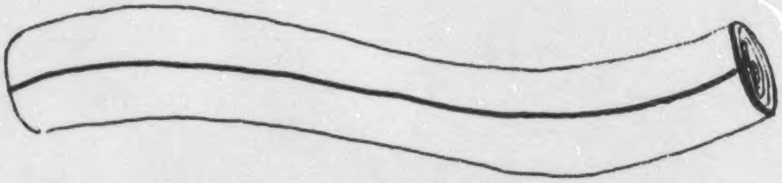
1. Measure and mark your tree branch. It should be 4 cm to 6 cm in diameter and as straight as possible.
   - a. Measure for a 45 cm long feeder.
     Mark sawing line with a piece of chalk.
   - b. Trim so small branches or knots are left at least 3 cm from main branch. (Snap or break small branches off to look more natural).



2. Saw the branch to length. Use a miter box for square ends.



3. Lay branch on a table and make a chalk line down the center, full length of branch. Your branch may be crooked, so make sure the chalk line is in the center.

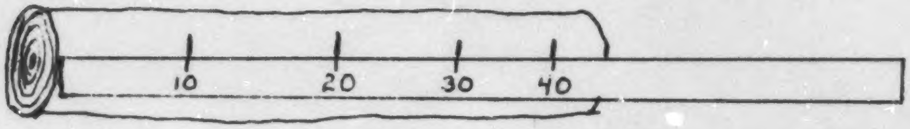


STUDENT ACTIVITY SHEET No. 2

4. Turn branch over so the chalk line is laying flat on the table. Mark another chalk line straight down the center of the branch as you did in step 3.

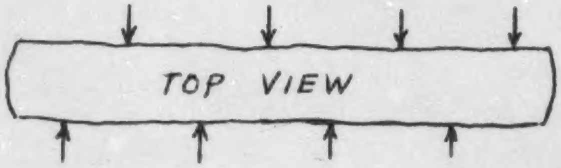
The two chalk lines should be 180° apart. (One-half the circumference of the branch)

5. Using a meter stick, start at the left end of the branch to measure and mark with chalk every 10 cm on the lengthwise chalk line.



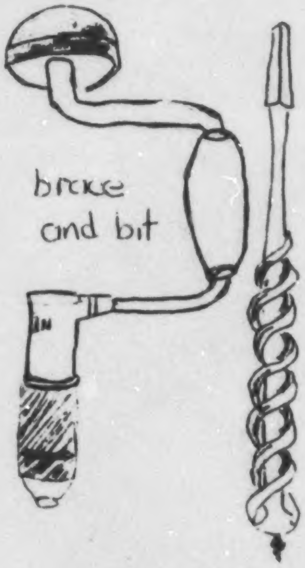
6. Turn log end for end, start at left end on the second chalk line, again marking every 10 cm.

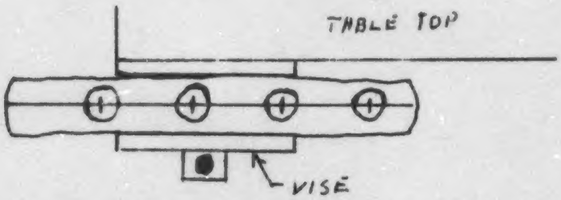
Compare marks on both sides of branch. The marks have to be staggered.



7. Take branch to drilling table.

   a. Using hand brace and auger bit. drill where chalk lines cross.
   b. Drill the four holes 1.5 cm deep.





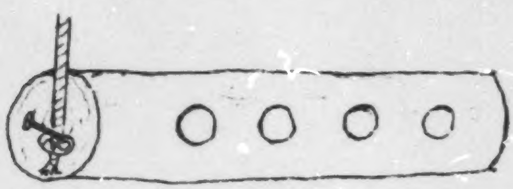
   c. Turn branch over and drill the other four holes.

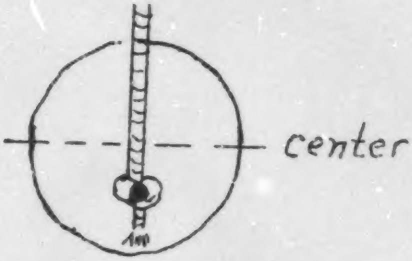
STUDENT ACTIVITY SHEET No. 3

8. Cut two pieces of rope so each is 80 cm long. Tie knots in each end of both ropes.

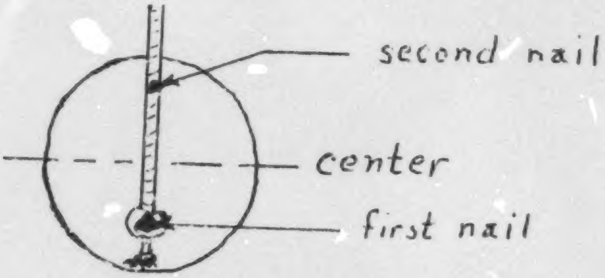
9. Run a 2.5 cm roofing nail through knot of each rope. Nail one rope on each end of branch.

   Make sure branch is setting so the sides have both rows of holes showing. Nail just below the center of branch.

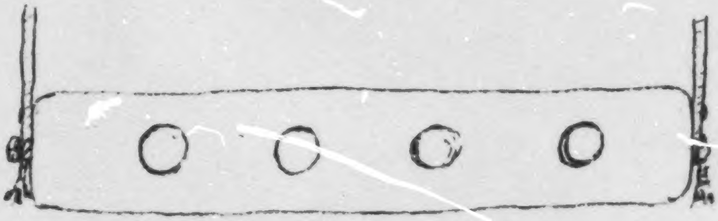




10. Nail the 3 cm paneling nail through the rope, close to upper edge of branch. The paneling nail will prevent the branch from turning.



11. Hold up branch by both ropes, it should hang like this.



12. Mix peanut butter and birdseed.

    a. Get a paper cup.
    b. Pour in 50 ml of birdseed.
    c. Mix in 25 ml of peanut butter.

13. With a flat stick, pack food mix into 1/2 of the drilled holes in the branch. Keep leftover mix to use at home when needed.

14. Put your feeder in a recycled plastic bag to transport it home.

15. When you have the feeder home, hang it in a tree.

    a. Use a safe ladder to hang the feeder on a medium height branch.
    b. Tie it parallel to the ground.

RECORDING MY OBSERVATIONS

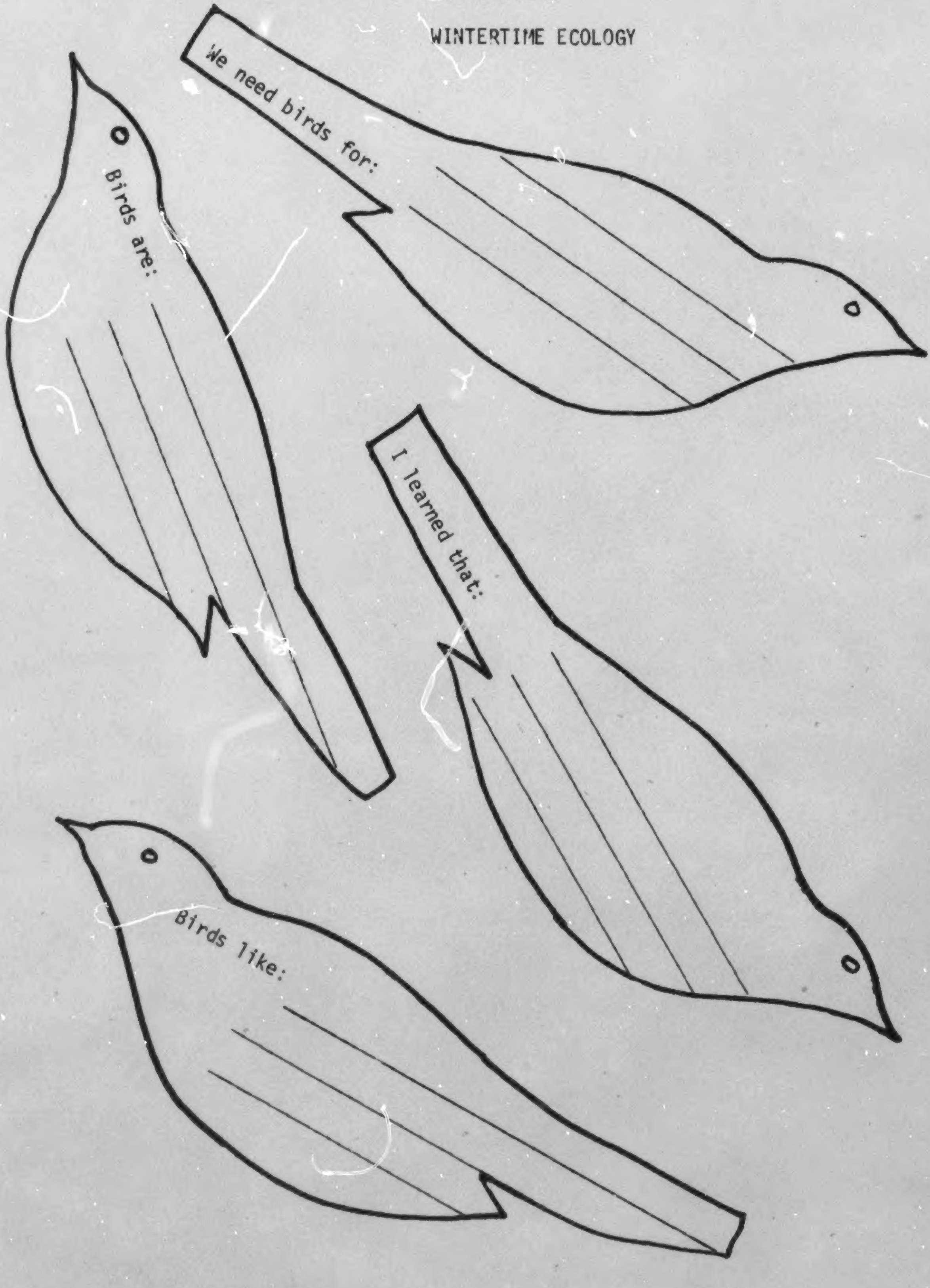
Location of my bird feeder:____________________

DATES	FOOD USED	BIRD WATCHING NOTES
Week 1		
Week 2		
Week 3		
Week 4		
Week 5		
Week 6		

301

BIRD FEEDING

WINTERTIME ECOLOGY


We need birds for:
Birds are:
I learned that:
Birds like:

RESOURCE SHEET

FOR THE TEACHER:

"Different Diet for Birds" Better Homes and Gardens. January 1978, pages 95-96.

Elementary Education Committee Of The Wildlife Society. Ways of Wildlife. Edited by Eleanor Horwitz. Englewood Cliffs, NJ: Clifton Press, 1977. (904 Sylvan Avenue).

Environmental Action Coalition. It's Your Environment: Things To Think About-Things To Do. Edited by Sherry Koehler. New York: Charles Scribner's Sons, 1976.

National Wildlife Federation. Wildlife Week Ideas for Teachers. Washington, DC: National Wildilife Federation. (1412 Sixteenth St.). Excellent free materials published each spring.

Purdy, Susan. Festivals for You to Celebrate Facts, Activities and Crafts. New York: J. B. Lippincott, 1969.

Ranger Rick Reprint. Recycle For The Birds. Washington, DC: National Wildlife Federation. (1412 Sixteenth St.). An article on making feeders from recycled articles.

Skelsey, Alice and Gloria Huckaby. Growing Up Green. New York: Workman Publishing Company, 1973.

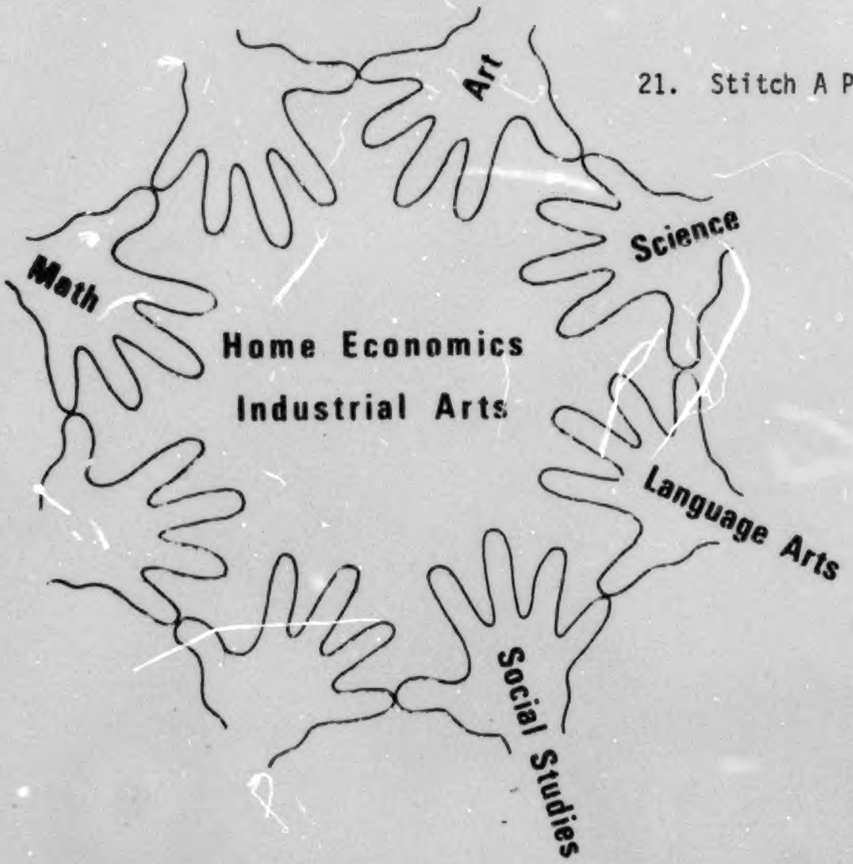
FOR THE STUDENT:

Allen, Gertrude E. Everyday Birds. Boston, MA: Houghton Mifflin Co., 1971.

Hines, Bob and Peter A. Anastasi. Fifty Birds of Town and City. Washington, DC: U.S. Department of the Interior, Fish and Wildlife Service, U.S. Government Printing Office.

Leverich, Kathleen. Cricket's Expeditions. New York, NY: Random House, 1977.

21. Stitch A Picture


Art
Science
Math
Home Economics
Industrial Arts
Language Arts
Social Studies

Hands-on Approach

wichita public schools
wichita, kansas

Activity Based Curriculum for Elementary Education

ACTIVITY BASED CURRICULUM FOR ELEMENTARY EDUCATION

ACTIVITY TITLE:

Stitch A Picture

AREA TITLES AND MAJOR CONCEPTS:

Art
  Creative expression
  Colors - light and dark
  Texture
  Proportion

Language Arts
  Reading Readiness - eye-hand coordination
  Oral communication

Math
  Linear metric measurement

Science
  Sensory development - texture
  Studies of nature

Social Studies
  Illustrating cultures

DESCRIPTION OF ACTIVITY AND ENRICHMENT:

Each student or the class will make a wall hanging picture or mural. The designs are individually created and stitched with yarn on fabric such as burlap.

Required For This Activity:

Several techniques are presented in this activity. The teacher will select one of the techniques or devise their own variation.

RELATED CAREERS:

Recreation Specialist, Fabric Store Clerk, Art Teacher, Seamstress.

SUPPLIES:

Pencils
Background fabric (natural jute burlap is economical and loosely woven)
Yarn - variety of colors
Masking tape
Crayons and/or markers
2 pieces of bar soap (aid in threading needle)

Specialty supplies (according to technique selected)
Painting With A Needle
  tracing paper or lightweight unlined paper
A See-Thru Stitchery
  plastic-coated shelf paper
  nylon net

Practice squares of fabric (if desired)

That's a good one..
write it down!

EQUIPMENT:

Scissors
Centimeter rulers
Tapestry needles - large eye, blunt point (length depends upon age)

Jotting Space

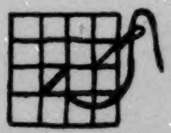
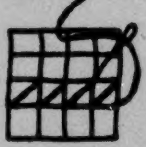
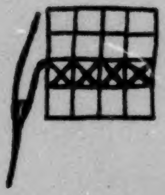
ACTIVITY PROCEDURES: (Select one technique)

"Painting With A Needle"

1. Draw and color a design or picture on tracing paper.
2. Tape, with masking tape, the paper design in the center of the background fabric.
3. Stitch the design right through the tracing paper. (See TIPS TO THE TEACHER #20 for simple stitches for children). When all of the design has been embroidered, tear off the tracing paper.
4. Add any final detail desired.

"Cross-Stitch Designs"

1. On 1 cm graph paper (page 8), have students sketch a design or object.
2. With crayons or markers, make "X" marks in squares for design, limiting it to 3 or 4 colors.
3. Tape paper design onto the background fabric, and cross-stitch in "X" squares with corresponding colored yarn. Tear off the paper when completed.
4. To make the cross stitch, start at the far left of a design and progress to the right. Insert the needle from the back through the cloth and paper at the lower left corner of the first square. Insert needle in the upper right corner, and pull it to the back. This one-half of the stitch is made the entire length of that color. Return to the left for the other half of the stitch.

"A See-Thru Stitchery"

1. Draw on paper--bold clear drawings with definite lines--using crayons or paints. In this method, the paper drawing is kept as the background of the yarn stitchery.
2. Staple nylon net over the top of the drawing paper after the design is finished.
3. Using a running stitch, outline and accent drawing with yarn. Leave paper on the net with design showing through.
4. Finish edge with yarn, using an overcasting stitch.

NOTE: A plastic-coated, shelf-lining paper is a better choice for these pictures since ordinary drawing or construction paper has a tendency to tear. Be sure it is the nonadhesive kind. The children will have to use a large-eyed needle with a sharp point to go through the firm paper.

FOLLOW UP IDEAS:

For an additional yarn experience, have students lightly draw a design on a recycled plastic foam tray from meat or vegetables. Next, punch holes 1 cm apart along the outline. Trim any excess from the back of the tray. Dip one yarn end in white glue, and let it harden to form a "needle." The yarn will look like a long shoelace. Knot the opposite end. Lace the tray like a sewing card. Add yarn at the top and hang.

Explore the weaving of fabrics. Using small scraps of burlap, pull crosswise threads, leaving an open effect. Make them into mini-hangings by gluing on yarn and beads or weave yarn into some of the pulled spaces with a tapestry needle.

Have a guest demonstrate a yarn craft, such as crewel embroidery, needlepoint, hooked rugs, or knitting. *Name some reasons people do yarn crafts.*

In colonial times, children learned their alphabet and numbers by doing stitchery. These were called--*Samplers*. Some of these samplers are in museums now and represent a facinating record of early American life.

Use library resources for pictures and information about early American stitchery. Visit a museum to see other ways the frontier settlers used stitchery. *"See Resource Sheet - Strobell."*

Make placemats from washable burlap. Zigzag around the mat about 2 cm from the edge and fringe. With yarn, stitch in the center a design or outline.

Have each student title their stitchery. Discuss factors to consider in a title.

EVALUATION:

Have individual conversations with each child about their stitchery. Use the following only as sample questions to initiate response.

What have you liked about making these pictures?

Tell me about your picture.

What have you learned while making your picture?

Conduct a class showing of finished stitchery.

Invite guest to the showing or display in a showcase for a period of time.

TIPS TO THE TEACHER:

1. Don't help by doing the stitching for a child. Instead, give encouragement and simple directions on possible ways to solve their problem.

2. When working with small children, don't ask them what object they are making. The stitchery can just be a design. The fun and learning is in the doing; not in making a real-to-life picture.

3. Cut 60 cm to 70 cm pieces of yarn--a good length for young children.

4. Make the background fabric 8 cm longer and wider than paper design, if fastened with masking tape to cardboard when stitchery is completed.

5. Don't pull the yarn tight as the stitch will pucker the fabric.

6. End the yarn by passing it under a few stitches on the backside before cutting.

7. Tape the edges of burlap with masking tape to keep the edges from raveling.

8. To stiffen limp background fabric for stitching, spray the back with 2 or 3 light coats of spray starch. Iron the fabric with a warm iron after each coat of starch is applied.

9. For an applique on part of a design, cut the shape from a fabric scrap. Iron to background with fusible bonding such as Stitch Witchery. To emphasize, or add detail, outline with yarn.

10. Anchor the yarn in the needle to prevent the needle from becoming unthreaded while stitching. Leave a tail of thread about 15 cm long after the needle is threaded. Split the main strand of yarn in two with the point of the needle a short distance from the needle. Push the needle completely through the split yarn. Pull both ends firmly away from the needle. The main strand of yarn will enclose the shorter tail and anchor the needle.

11. Background fabric for children's stitcheries should be easy to pierce with a tapestry needle, which has [illegible] blunt point. Avoid tight materials such as sheeting, muslin, and felt.

12. For beginners making individual hangings, pieces could be 22 x 26 cm.

13. Use loosely, woven drapery and upholstery remnants that are not rubber backed for different textures.

14. As the number of a tapestry needle increases, the needles become smaller. Very young children might use #14 plastic needles, while older students could use a #18 or smaller needle.

15. For a measuring lesson, have the students measure and cut yarn pieces in 70 cm pieces in preparation for the activity.

TIPS TO THE TEACHER - Continued

21. Drawings could be coordinated with science or social studies topics. Examples are: Early America scenes, Indian tribes, bird studies, vacation spots, and our community.

22. Have very young children stitch directly on burlap, creating a spontaneous design with no previous drawing.

23. For the cross-stitch graph paper deign, cut 9 pieces of burlap from a yard of 41" wide natural burlap. This allows space at the edges to turn over cardboard or fringe. The pieces will be 33 cm x 29 cm.

24. To personalize stitchery, have each embroider their initials on design. Some might want it to make it a part of their design.

PLEASE RECORD ALL BRAINSTORMS.

HEALTH AND SAFETY PROCEDURES:

1. Use a blunt-point tapestry needle--not a sharp darning needle--with burlap or loosely, woven fabrics.

2. Keep needles and pins out of your mouth.

3. Remind students that fabric scissors are very sharp. Demonstrate the proper use and care of fabric scissors.

4. Do not allow students to lay stitchery where people may sit down. Even though the needle is blunt, it could hurt!

TIPS TO THE TEACHER - Continued

16. For special effects, glue or sew on curtain-fringe balls for flower petals or small buttons for eyes after completing embroidery.

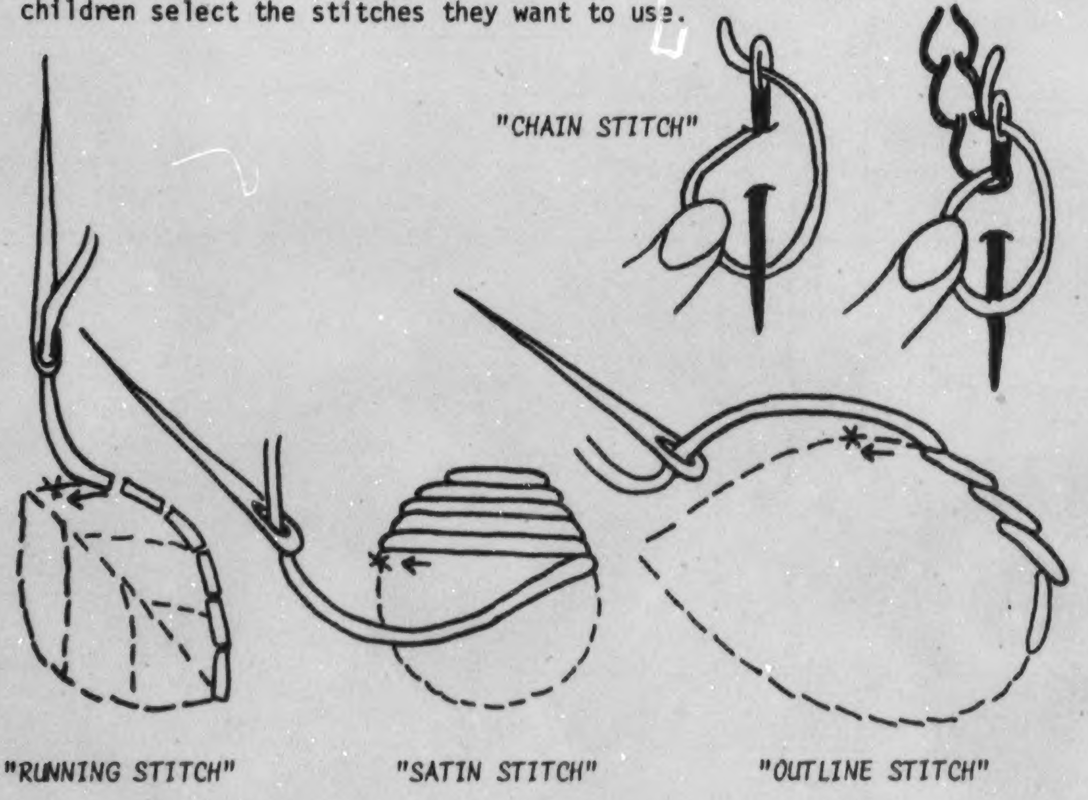
17. Describe embroidery to children as "painting with a needle."

18. To finish hangings, mount on cardboard, frame, or fringe edges. If fringing, put a hem in the top edge and insert a small dowel rod.

19. There are several techniques that can be used to make it easy for children to thread a needle with yarn. Select one:

    a. Demonstrate to students how to stiffen and flatten the yarn for easy threading. Place one bar of soap on the table. Moisten the end of the yarn, and lay 2 or 3 cm of the end on the soap. Place the second piece of soap on top. Pressing very firmly on the soap, pull out the yarn with the other hand. Repeat two or three times.
    b. A big eye needle may also be threaded by placing the yarn inside a hairpin, then pull the hairpin out through the eye of the needle. The yarn will pull through, too.
    c. Another method is to tie a thread around the yarn. Pull the thread through the eye of the needle which will pull the yarn through, too.

20. The following basic embroidery stitches could be made on large bulletin board samples. Younger children may only use the running stitch. Let the children select the stitches they want to use.



CENTIMETER GRAPH PAPER

Dear Parent:

As an activity for art and language arts, our class has been stitching yarn pictures. Eye-hand coordination is only one of the enrichments from this activity. Other subject areas have been used in this activity as well.

Your child will enjoy telling you about this activity.

Your child may enjoy doing some more "painting with a needle." The supplies are not expensive. Needed are natural jute burlap or other loosely woven scraps, leftover yarn pieces, and a large tapestry needle. A tapestry needle has a large eye and is blunt on the end. If limp, stiffen fabric with several coats of spray starch on the back of the fabric, ironing after each spraying. Keep the edges from raveling by covering with masking tape. The design should be one of the child's.

Most children love to paint. Stitchery can be great fun, too. It also develops appreciation of color and texture and opens channels of communication. The fun is in the doing; not in a perfect design.

Thank you for you interest in our classroom work.

RESOURCE SHEET

FOR THE TEACHER:

Butler, Anne. Embroidery for School Children. Charles T. Branford Co., 1969.

Davis, Mary Kay. "Teaching Your Child To Stitch," Better Homes and Gardens. March, 1978, pages 198 & 200.

Enthoven, Jacqueline. Stitchery For Children A Manual For Teachers, Parents, and Children. New York: Van Nostrand Reinhold Co., 1968.

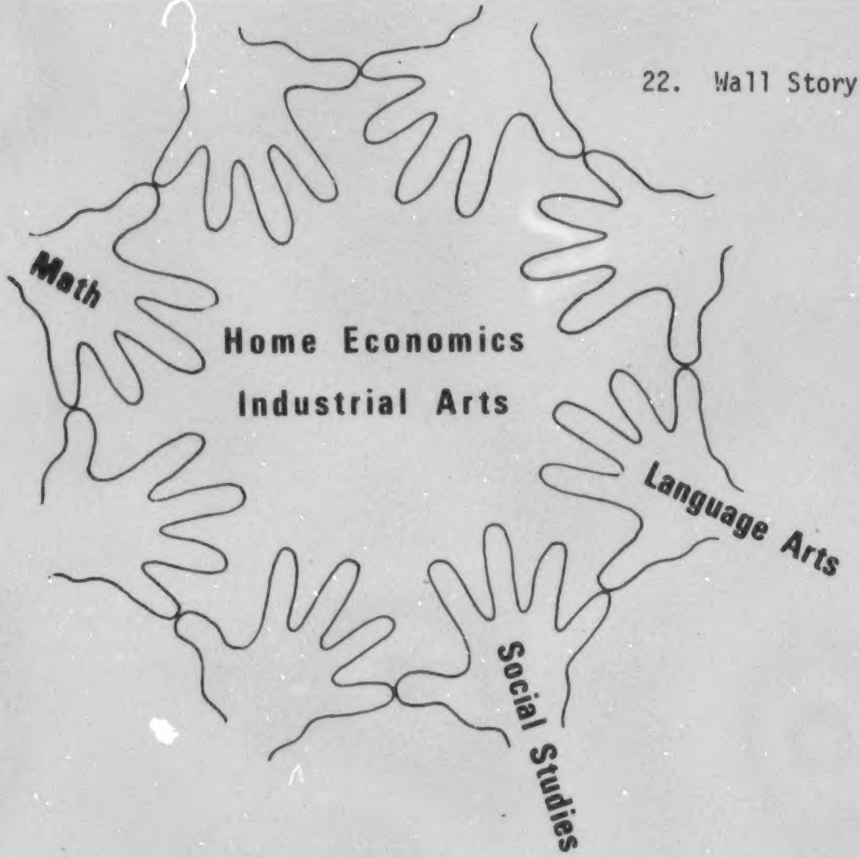
Kenny, Maxine. "Yarn Stitchery On Burlap, What Do You Like To See or Do On A Vacation," Getting To Know You Through Art. Minneapolis: T.S. Dennison and Co., Inc., 1977.

Strobell, Adah Parker. "Like It Was" Colonial Games 'N Fun. Handbook. Pageantry, Crafts, Music, Games, Recipes and Pastimes of the Colonial Era. Washington, DC: Acropolis Books, Ltd., 1975.

FOR THE STUDENT:

Fiarotta, Phyllis. Sticks and Stones and Ice Cream Cones, The Craft Book For Children. New York: Workman Publishing Co., 1973.

22. Wall Story Plaques


Math
Home Economics
Industrial Arts
Language Arts
Social Studies

Hands-on Approach

ACTIVITY BASED CURRICULUM FOR ELEMENTARY EDUCATION

ACTIVITY TITLE:

Wall Story Plaques

AREA TITLES AND MAJOR CONCEPTS:

Language Arts
  Following directions
  Creative writing

Math
  Geometry-making squares and rectangles
  Linear metric measurement

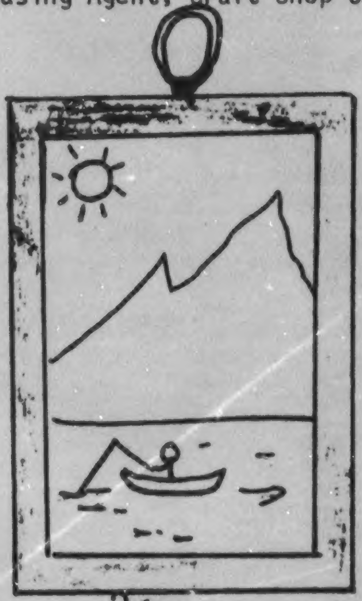
Social Studies
  Observing and expressing feelings

DESCRIPTION OF ACTIVITY AND ENRICHMENT:

Each student will select one picture which tells a story. This picture is then marked and cut to make a square or rectangle. A piece of wood is measured and sawed longer and wider than the picture. A simplified decoupage process completes the plaque. The student will write a creative story to express the feelings and action illustrated in the picture.

RELATED CAREERS:

Interior Decorator, Gift Shop Purchasing Agent, Craft Shop Clerk, Writer, Copywriter, Layout Worker.



316

SUPPLIES:

- Prints or pictures from magazine covers, old greeting cards, calendars *(heavy-weight paper for less wrinkles and air pockets in gluing)*
- Wood scraps - softwood
- Clear wood finish (such as Deft Wood Armour)
- White glue
- Sandpaper
- Decorative hanging rings - screw on top of plaque
- Newspapers, masking tape, or plastic for finish table

EQUIPMENT:

- Saws
- Pencils
- Scissors
- Miter box and/or sawing jig (page 5)
- Centimeter rulers
- Try-squares
- Paint brushes
- C-clamps
- Wooden clamps

ACTIVITY PROCEDURES:

1. Conduct a picture hunt for story pictures. Select a group of pictures, number them and pass around the room. Have students jot down a "story idea" sentence about several of the pictures. See how many different ideas develop from one picture. Point out that writers must start with many ideas but may use only a few.

2. Use Parent Letter (page 6) for permission to use tools. Introduce activity.

3. Student Activity Sheet (page 7) outlines steps of activity which will involve several days from the time a picture is selected until the hanger is put on. Using the Student Activity Sheet, have each student check off the steps as completed, placing a mark in the box.

4. Before working with the tools, identify the equipment, materials and safety rules.

5. After steps 1 - 3 are completed, set up 4 work centers for steps 4 - 7: (1) measuring wood, (2) sawing, (3) sanding, and (4) gluing on the picture.

6. The following day so glue is dry, set up a table for finish so plaques will not have to be moved once finish is started until completely dry.

7. While waiting for requipment or after the plaque is made, students are to write a creative story about their picture. Give adequate time for an idea to be scrapped and a new idea developed.

8. Send home Parent Letter (page 8) to describe activity and enrichment.

FOLLOW UP IDEAS:

From a brain storming session, make a classroom list of all the things that are made from wood such as news papers, furniture, floors, books, etc. Magazine and catalog pictures could then be used to provide more ideas.

Conduct a community survey of the businesses that sell ready-made wood plaques. Compare the cost of commercial decorative plaques to the ones made in class. What other benefits, besides cost, come from making your own wall hanging? What other materials are used to make decorative wall hangings in addition to wood.

Provide open ended story situations and/or pictures in a classroom learning center for more creative writing experiences. Provide lot of ideas and enough time for personal ideas to generate, be tried and changed.

EVALUATION:

Have a gallery showing of the finished plaques. Under each plaque display a picture name given by the student which also could be their story title.

Each student could tell or read their story to the class. Remember these are to be creative writings and point to the class that all ideas are good thought starters. Writing ability will vary but everyone can be creative in story ideas if encouraged.

HEALTH AND SAFETY PROCEDURES:

1. Make sure every student has permission from home to work with tools.
2. Always wear safety glasses when using power or hand tools.
3. Be sure the miter box and sawing jig are clamped tightly.
   Beware of saw teeth. They are sharp. Keep hands off cutting edges.
   Sawing slowly with long steady strokes provides an easier cut and less chance of the saw slipping.
   Have young students use both hands on the saw. It eliminates cuts and makes sawing easier.
4. Explain and demonstrate the use of finish.
5. Place sanding work center ventilation. Tape sandpaper to work table.

TIPS TO THE TEACHER:

1. The finish should not be started until the glue has dried overnight. The finish could be completed in a classroom center with 2 or 3 students at a time, if a no-odor finish is used (such as Deft Woodarmor). Use small scraps of wood under plaque to hold it up off the paper until all coats dry.

2. Dilute white glue with a small amount of water to make it easier to spread over entire picture. This helps to prevent "bubbles."

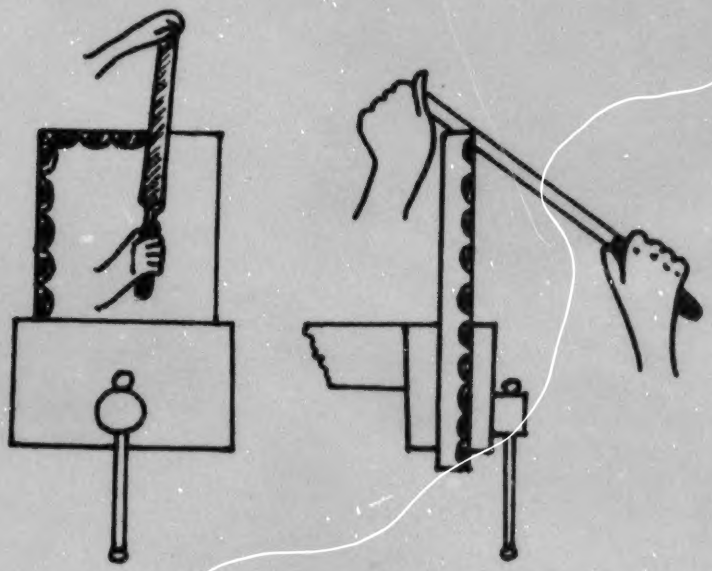
3. The size of pictures used for the wall plaques should be small enough for wood scraps available and not larger than sawing jig (25 cm). Greeting card size is ideal. Many pictures can be trimmed.

4. Saw the length of the board, turn in sawing jig or miter box to saw width. Clamping down board will help students in sawing.

5. Heavy-weight paper is easier to glue than light-weight magazine pages. Calendars, greeting cards, magazine covers, and drawing paper can be used.

6. The number of coats of finish will depend upon time. Three to five coats of "Deft Woodarmor" make a nice finish. It can be applied every two hours. (You may want younger students to put on only two coats).

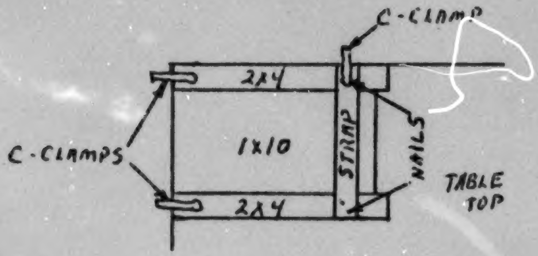
7. For older students, edges of the plaque may be made decorative by using a half-round file to make regularly spaced notches. This should be done before gluing on picture.



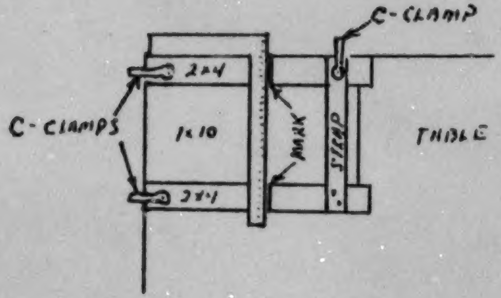
TIPS TO THE TEACHER Continued

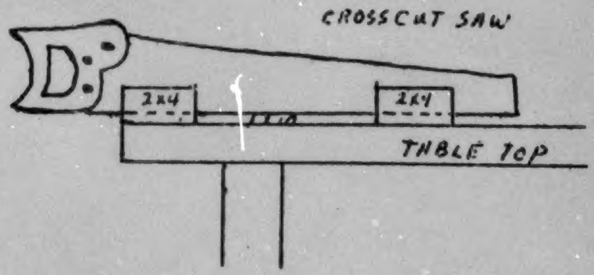
Make sawing jigs for boards too wide for miter box.

a. Toward the edge of the table clamp two 2 x 4 boards on each side of a 1 x 10 board. Nail a wooded strap across the loose ends of the 2 x 4 boards. Clamp the strap to the edge of the table.

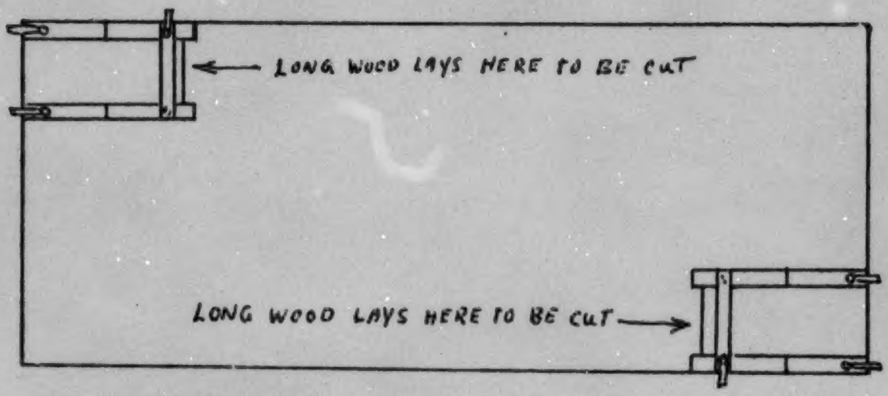

C-CLAMP
2x4
C-CLAMPS
1x10
STRAP
NAILS
TABLE TOP
2x4

b. Lay a framing square across both 2 x 4 boards and mark. Select a cross cut saw and cut both 2 x 4 boards, on the lines at the same time, Miter-box style. Stop sawing when saw scratches the 1 x 10 board. KEEP SAW FLAT.


C-CLAMP
2x4
C-CLAMPS
1x10
MARK
STRAP
TABLE
2x4


CROSSCUT SAW
2x4
1x10
2x4
TABLE TOP

c. To cut boards, slip a long piece of wood in back of jig until cut line is directly under saw blade. Keep saw flat while sawing.


LONG WOOD LAYS HERE TO BE CUT
LONG WOOD LAYS HERE TO BE CUT

ACTIVITY BASED CURRICULUM FOR ELEMENTARY EDUCATION

Dear Parent:

As part of our ABC/EE program your child will have the opportunity to participate in hands-on projects in Language Arts, Math, Social Studies, and Science. Your child may be working with basic hand tools, small electrical appliances and tools, wood burners, carving tools, and/or sewing machines.

We will demonstrate equipment and take all precautions for their safety. You may also help by talking with your child about safety in use of tools.

In order for us to have an awareness that you do have a knowledge of your child's activities, we must have your consent before allowing your child to use any equipment.

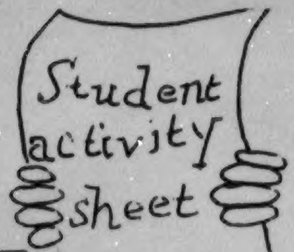
The attached permission slip must be signed in order for your child to participate in our activities.

You are welcome to visit our classroom at any time during ABC/EE activities. Please feel free to ask any questions concerning this program.

I give my permission for ______________________________ to use the equipment and tools in the classroom ABC/EE activities.

____
(Parent or Guardian)

____
(Date)

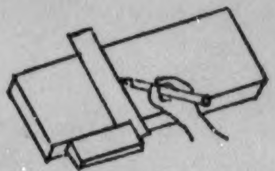


Story Plaque

☐ 1. Select a picture that you like. This picture should tell a story.

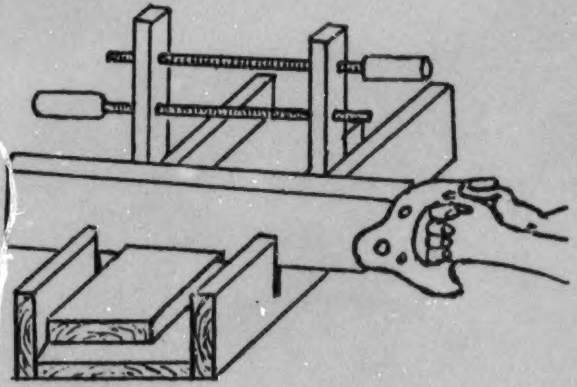
☐ 2. *Where is the action in the picture? What catches your eye?* If you need to reduce the size of your picture, mark a rectangle or square around the part you want to use on a plaque.

Check the corners on your picture with a tool called a "Square," to be sure they are right angles.



☐ 3. With paper, make a pattern for the size of wood needed. This should be 2 cm longer and 2 cm wider than your picture. Have this pattern checked.

☐ 4. Take the measurements of your pattern to mark your wood. Use a try-square to draw the lines. Clamp the wood in a miter box and saw. Turn the board and saw the width.



☐ 5. Write your name on the back.

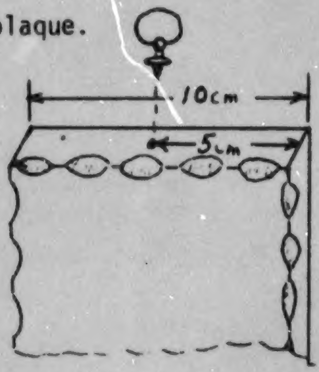
☐ 6. Sand the edges smooth.

☐ 7. Glue your picture in the center of the wood, spreading glue over the whole picture. Let dry.

☐ 8. Set plaque on small wood scrap to brush on clear wood finish. Wait for finish to dry between each coat. (If you are using Deft Wood Armour, wash the brushes with water).

☐ 9. Write a story about your picture: *What is happening? How do they feel?*

☐ 10. Find the center on the top edge of your plaque. Screw in hanger.



Dear Parent:

As an activity in language arts, math, and social studies, our class made wall plaques. Each student computed in centimeters the measurements for their wood, according to the size of picture used. A story was written for the picture on the plaque. Your child can share this with you.

Our process in making the wall plaque is simple. Your child has a Student Activity Sheet that outlines the steps. This could be a fun family activity for gifts or home decoration of treasured prints. Wood scraps make the project very economical. Be sure to let your child help you. Time together can be valuable for sharing feelings as well as pride in the accomplishment of making something.

Thank you for your interest in your child's activities.

RESOURCE SHEET

FOR THE TEACHER

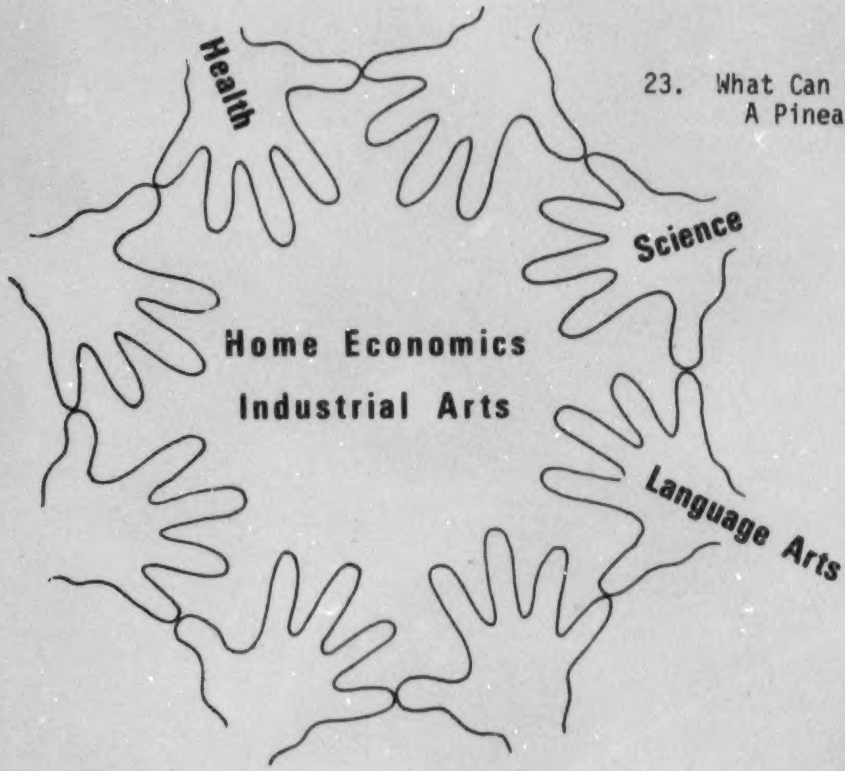
Creative Moments: 50 Activity Folders For Fun and Challenge. Boston: Creative Studies Inc., 1972.

Griffin, Hollis. *Imagination: Activity Cards For Middle and Upper Grades.* Palos Verdes Peninsula, CA: Frank Schaffer Publications, Inc., 1975. (26616 Indian Peak Road)

Grimm, Gary and Don Mitchell. *The Good Apple Creative Writing Book.* Carthage, IL: Good Apple, Inc., 1976. (Box 299)

Jotting Space

23. What Can We Do With A Pineapple?


Health
Science
Home Economics
Industrial Arts
Language Arts

Hands-on Approach

wichita public schools
wichita, kansas

Activity Based Curriculum for Elementary Education

ACTIVITY BASED CURRICULUM FOR ELEMENTARY EDUCATION

ACTIVITY TITLE:

What Can We Do With A Pineapple?

AREA TITLES AND MAJOR CONCEPTS:

Science
  Sensory development
  Plant growth

Language Arts
  Oral language development

Health
  Fruits are nutritious
  Safety with knives

DESCRIPTION OF ACTIVITY AND ENRICHMENT:

The students will examine the feel, smell, and describe the appearance of a raw pineapple; then the pineapple will be cut to explore the taste, texture, and smell of the interior. The stem of the pineapple will be used to start a plant for the classroom.

RELATED CAREERS:

Pineapple Farmer, Marketing Personnel, Scientist, Grocer, Factory Worker, Horticulturist.

SUPPLIES:

Fresh pineapple
Napkins
Toothpicks

EQUIPMENT AND TOOLS:

Sharp knife
Paring knives
Trays
Cutting boards
Small glass (such as jelly glass for rooting top)
Clean-up equipment

326

ACTIVITY PROCEDURES:

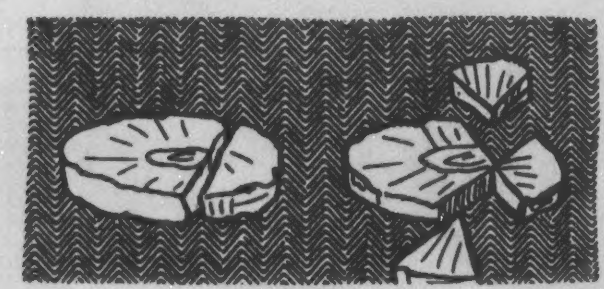
1. Have students sit in a circle or a comfortable arrangement for group discussion and interaction.

   a. Pass the pineapple around. What is this? Have you ever eaten this? Ask the children to think about what they see, feel, and smell. Talk about their observations after everyone has had a chance to hold the pineapple. Record their findings and new words.

   b. Are pineapples fruits or vegetables? Fruits have vitamins and roughage needed to be healthy. Some fruit should be eaten each day.

   c. Before cutting, have students tell how they think the inside will look. Will it have seeds? Does it have a hole in the center? What color is it inside? Is it juicy or hard? LET'S SEE!

2. For further exploring and a tasting session, the teacher slices the pineapple and demonstrates preparing one slice. Cut the pineapple crosswise to make slices about 2 cm thick. Next, cut the peel off one slice, cut out little triangles for the eyes, and cut into chunks around the core.



   a. Discuss and demonstrate using a knife and a cutting board. Hold a knife while washing; do not lay in dishwashing water.

   b. For older classes, divide in small groups. Giving each a tray with a paring knife, cutting board, napkins, slice of pineapple and toothpicks. The group cuts and tastes pineapple chunks.

   c. For younger classes, cut the chunks for them. A parent aide would speed the cutting process. Have a student pass the tray for the tasting experience.

   d. Have students verbally describe the taste, smell, texture, and appearance.

327

ACTIVITY PROCEDURES: Continued

3. Use the top of a pineapple to grow a classroom plant. When it has grown, it will have long, arching leaves.

    a. Twist off the top part of the pineapple, before slicing. Then remove the lower leaves, exposing the stem for 4 to 5 cm.

    b. Place the top in a small glass and fill with water up to the lowest remaining leaves. Add water as needed to maintain this level. Within a week, you will be able to observe the first roots forming. Place in a cool location while rooting, with light but no sun.

    c. When the glass is about half filled with strong, healthy roots, the top should be planted in soil. Have students put about 3 cm of coarse gravel in a 15 cm clay flower pot. Plant the pineapple stem so just the leaves are exposed. Soak it thoroughly and set in a warm light place. The soil should be kept wet, but not drenched until new leaves appear. Then keep it like any other houseplant. It will grow best in a sunny spot.

4. Send home Parent Letter when students take home creative drawings and writings (page 6).

PLEASE RECORD ALL BRAINSTORMS.

FOLLOW UP IDEAS

Explore the sensory characteristics of other foods.

With the class, make a spelling list out of descriptive words used for feel, smell, taste, and appearance of the pineapple.

Ask for volunteers to do mini-research reports, such as:

How do pineapples grow?
What states do pineapples grow in?
How do pineapples get to us?
What ways can you buy pineapples?
How much does pineapple cost?
What fruit grows in our area?

Grow other plants from food products such as avocado seeds or sweet potatoes.

Introduce a coconut. Puncture the eyes with an ice pick. Drain the milk. Let each child taste it with a straw. Heat the coconut to 350° for 30 minutes to loosen meat, then hit with a hammer. Remove meat, grate, and taste.

EVALUATION

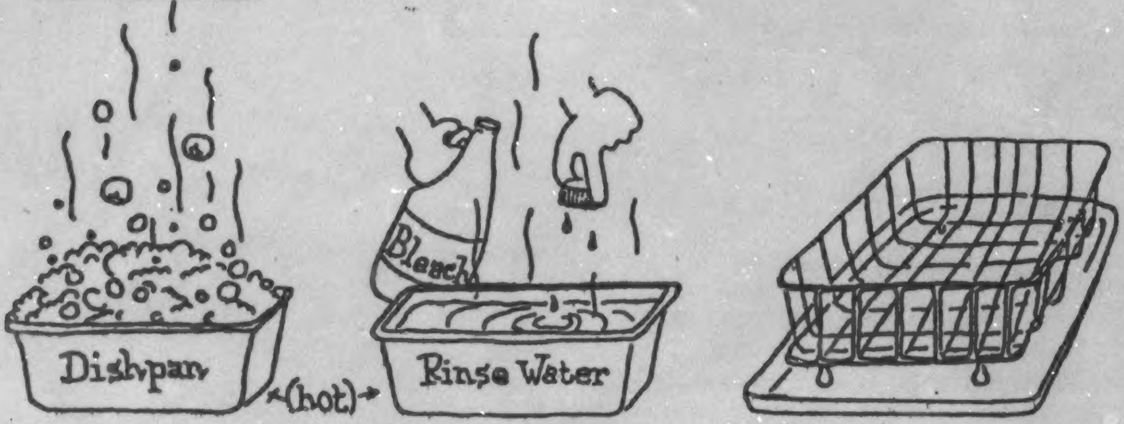
Have the students draw a creative picture to illustrate one of the following: taste, feel, smell, or appearance of a pineapple. Write one sentence or paragraph to describe a pineapple. (Is it sweet, sour, hard, smooth, tart, crisp, spicy, crunchy, etc.).

HEALTH AND SAFETY PROCEDURES:

Knives are sharp. Carry knives with the points down. Cut away from fingers on a cutting board. Do not lay knives down in dish pan; hold the handle and wipe off with a dish cloth.

Pineapples are a fruit. Fruits are important for healthy bodies. Fruits provide vitamins and roughage. We should eat some fruit each day.

Clean Up Station



Cut disposable dish cloths in half.

Have tea towels available for drying the dishes when air drying in the drainer is not possible.

Add one capful of liquid bleach to the rinse water for sterilization of the dishes.

Clean up is part of the activity and should be planned with the class.

Carry clean, warm water in recycled plastic jugs to the clean-up station.

TIPS TO THE TEACHER:

1. Inducing your pineapple plant to bloom requires a special, but easy trick. After a good leafy growth has developed, put the plant in a large plastic bag, adding a ripe apple and twist the bag closed. Do not disturb for five days. The apple will be releasing ethylene gas as it ferments and this is the thing that turns the pineapple on. Now remove the plant from the bag and resume normal care. Within 2½ or 3 months, the pineapple will be flowering. With good care (and luck) from the flowering, there will come a baby pineapple.

2. Be sure all "flesh" of the pineapple is removed before putting the stem in water to root. Charcoal in the water helps prevent decay while rooting.

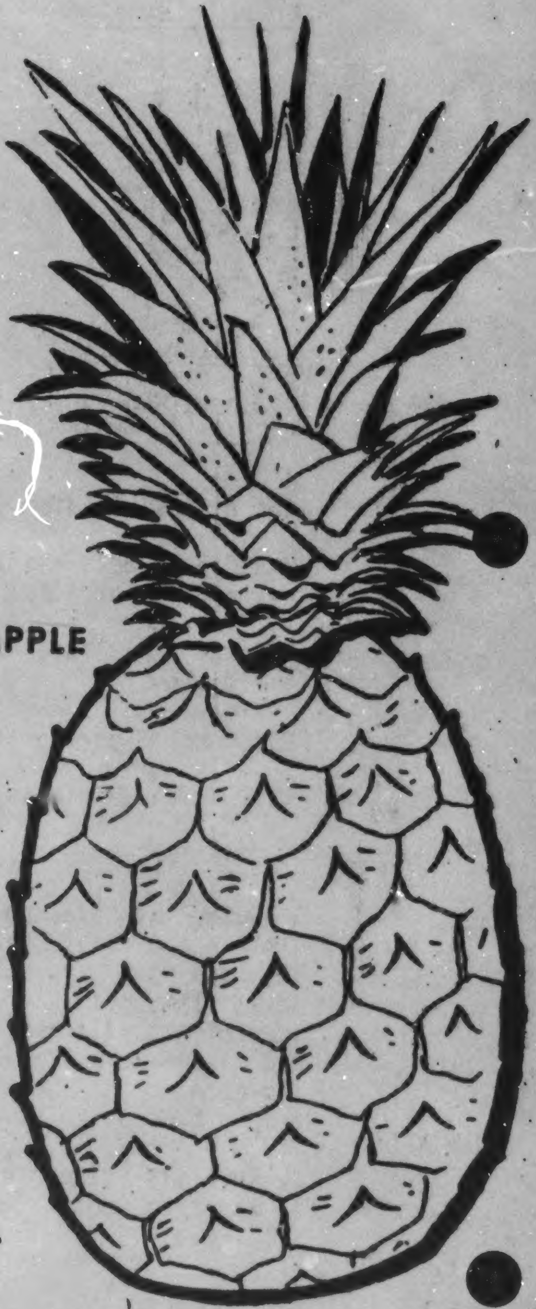
Dear Parent:

As a science, language arts, and health project, we have been exploring a pineapple. Our class used many words to describe the smell, feel, taste, and appearance of a pineapple.

As you use other fruits in your home, ask your child to describe it in their own words. This will help develop expression, sharpen senses, and increase awareness of differences.

Fruits are important for health. We learned that fruits supply vitamins A and C and roughage. Fruit should be eaten each day.

Thank you for your interest in your child's classroom work.



RESOURCE SHEET

FOR THE TEACHER:

Goodwin, Mary and Gerry Pollen. Creative Food Experiences for Children. Washington, D.C.: Center for Science In the Public Interests, 1974.

Huckaby, Gloria. Growing Up Green; Parents and Children Gardening Together. New York: Workman Publishing Co., 1973.

Johnson, Georgia. "Uncommon Explorations With Common Objects - Apple," Instructor. September 1977, p. 160.

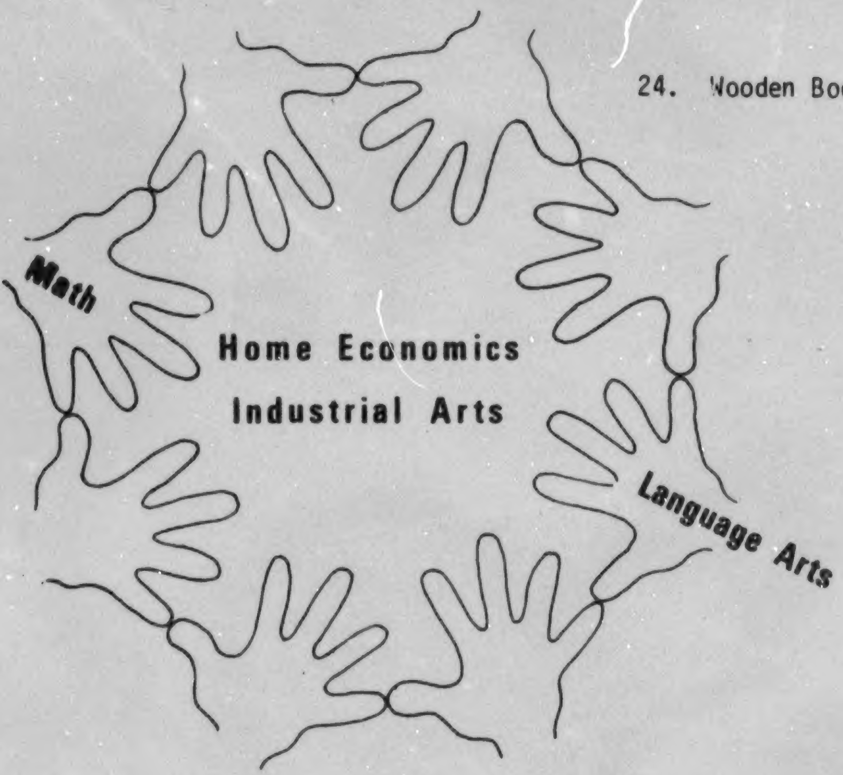
Nutritive Value of Foods. Manhattan, KS: Cooperative Extension Service, September 1975.

FOR THE STUDENT:

Fink, Ed. Look Mom, It's Growing. Barrington, IL: A.B. Morse Co., Countryside Books, 1976.

JOT IT DOWN!

24. Wooden Book Cover


Math
Home Economics
Industrial Arts
Language Arts

Hands-on Approach

wichita public schools
wichita, kansas

Activity Based Curriculum for Elementary Education

ACTIVITY TITLE:

Wooden Book Cover

AREA TITLES AND MAJOR CONCEPTS:

Language Arts
  Written communications - creative writing
  Reading and following directions

Math
  Metric linear measurement

DESCRIPTION OF ACTIVITY AND ENRICHMENT:

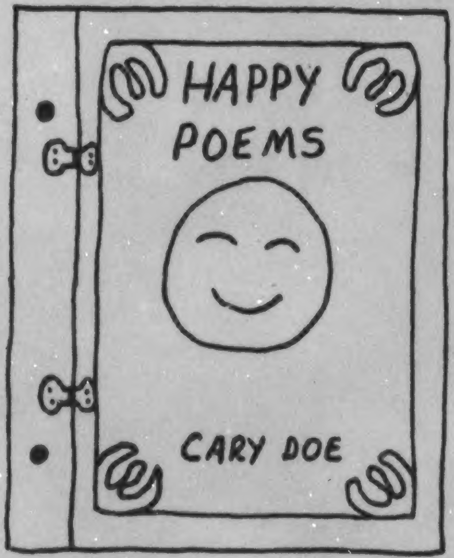
Through regular classroom study, students are to make an analysis, write, and collect poems, short stories, or other writings. Each student will make a wooden book cover for their creative writings. The wooden cover could also have a wide of variety of other uses such as keeping records, pictures, recipes, etc., that have been developed in any class activity.

RELATED CAREERS:

Fish and Wildlife Specialist, Forester, Lumber Yard Clerk, Poet, Editor, Cabinetmaker.

REQUIRED FOR THIS ACTIVITY:

The plywood must be precut to 22.5 cm widths.



SUPPLIES:

1/4" fir plywood (good both sides) - 20 book covers can be made from a 4' x 8' sheet of plywood (precut to 22.5 cm widths)
Paper
Pencil
Carbon paper
Hinges - 2 per cover
Shoe strings - 1 per cover
Finish - such as Deft Wood Armour
Sandpaper - 120 grit
Brown paper, newspapers, or plastic for finish table
Rags
Paint for design (opt.)

EQUIPMENT:

Try-squares
Centimeter rulers
Cross-cut saws
Screwdrivers or hammers (depends on hinge fasteners)
C-clamps and wooden clamps
Finish brushes
Drill - manual or electric
6.350 mm (1/4") - twist drills
Sanding blocks (at least 6)
Vises
Scratch awl or large finish nail
Wood burners
Wood carving tools (opt.)
Jig saw - hand-held electric (opt.)
Straight edge
Drill jig

ACTIVITY PROCEDURES:

1. Introduce the study of poems and/or short stories. Have students collect favorites and conduct beginning writing experiences.

2. Set up room for activity.
   a. Two jigs needed (pages 6 and 8).
   b. Make Work Station signs (page 10).
      Set up work stations, using Table Arrangement Sheet on page 10.

3. Preparation of students.
   a. Pass out Parent Letter with permission slip (page 9). Explain the purpose of the letter, activity to be conducted, and when to have permission slips returned.
   b. Pass out Student Activity Sheet (pages 11 to 15). Read through the activity procedures, step to step, allowing students to ask questions.
   c. Discuss all safety rules and regulations.
   d. Demonstrate operations, using proper procedures and tools.

4. Start just a few students at a time to Station #1.

5. The students that are not starting at the first could be working on sketching and perfecting a design on paper to be later traced on the front of the book cover and creative writings.

6. Send home Parent Letter #2 (page 16), after activity is completed.

FOLLOW UP IDEAS:

Have students conduct a search for information of the plywood industry--where wood comes from, where it is made, how it is transported, and where it is available locally. They should be made aware of how many people were responsible for having the plywood ready for them to use.

Plan a field trip to see a local lumber yard, and have someone there explain to what extent that lumber yard uses Language Arts and Math.

Have students record lumber yard terminology, vocabulary, jargon, or slang. Students could write a lumber yard poem, using the new words. Point out that poems can be written on any subject.

EVALUATION:

Formal evaluations could be on the achievement of understanding and appreciation of poems or story; however, a discussion could be conducted having each student tell what they learned and what they liked about making the bookcover.

Check on skill of using the centimeter ruler by line measurements on paper or small room objects.

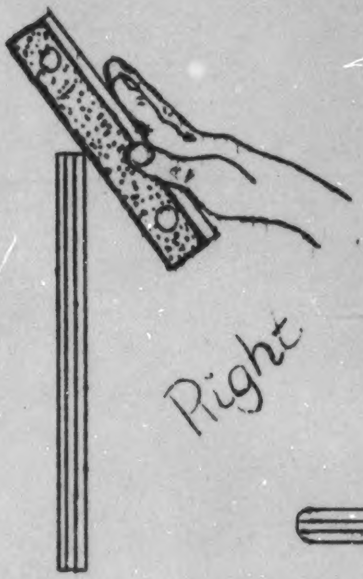
HEALTH AND SAFETY PROCEDURES:

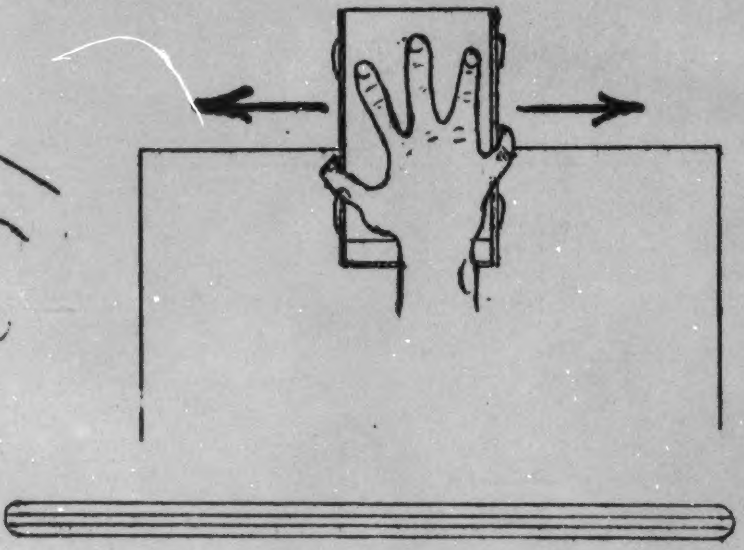
1. Make sure every student has permission from home to work with tools.
2. Explain and demonstrate procedures of each work station.
3. Make every effort to protect eyes. Always wear safety glasses when using power or hand tools.
4. Make sure there is no horseplay.
5. Explain and demonstrate the use of the finish materials.
6. When plywood is cut, there are sharp splinters that should be sanded off immediately.
7. Be sure jig and cover pieces are clamped tightly before drilling holes.
8. Beware of saw teeth. They are sharp. Keep hands off cutting edges.
9. Keep nails and screws out of your mouth.
10. Place the sanding and finish stations apart, but near ventilation.

That's a good one..
write it down!

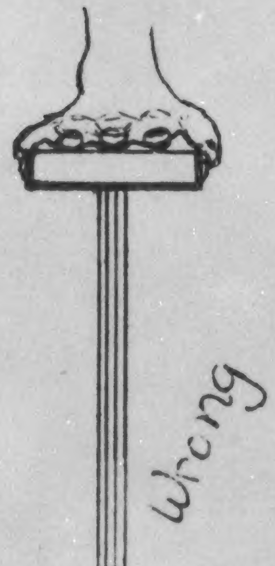
TIPS TO TEACHERS:

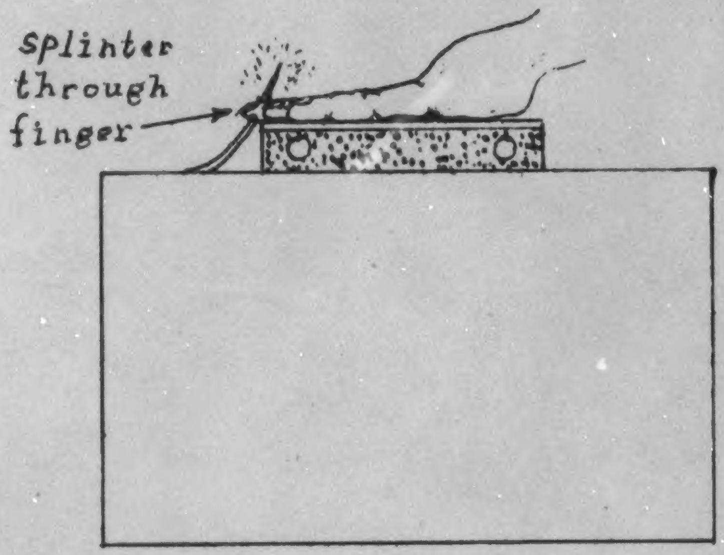
1. Thumbtack sandpaper to sanding block.
2. All sanding of edges should be done so that sanding block is at right angles to plywood edge. All edges must be rounded.





3. Never sand plywood edges with sand block straight and flat on plywood edge.

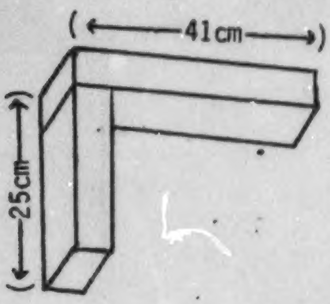


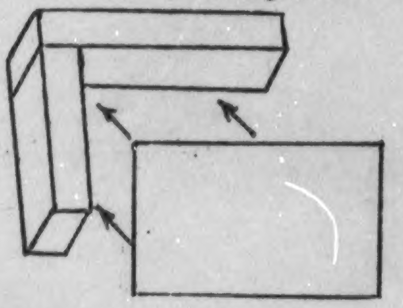

splinter through finger

TIPS TO THE TEACHER Continued

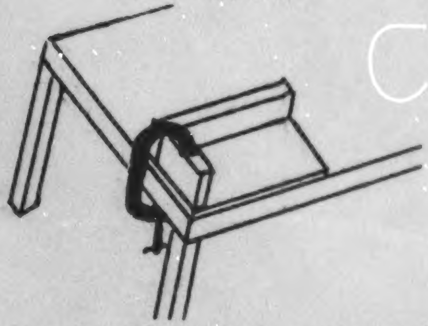
4. A drilling jig can easily be made to help students in lining up boards for drilling.

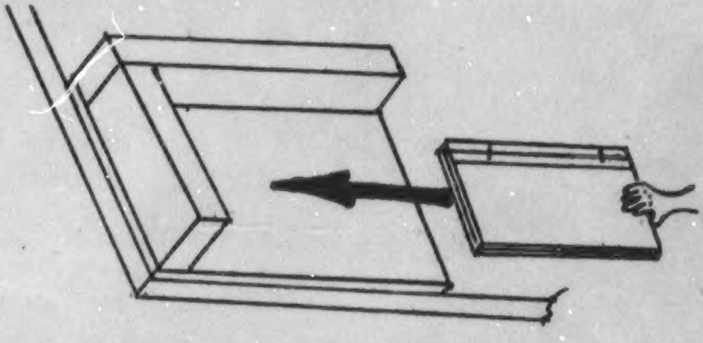
   a. Nail two 2 x 4's together. Make sure it is square.
   b. Nail a backing plate of 1" plywood or equivalent to the 2 x 4 fixture. Slide backing sheet under 2 x 4 frame, turnover and nail together.



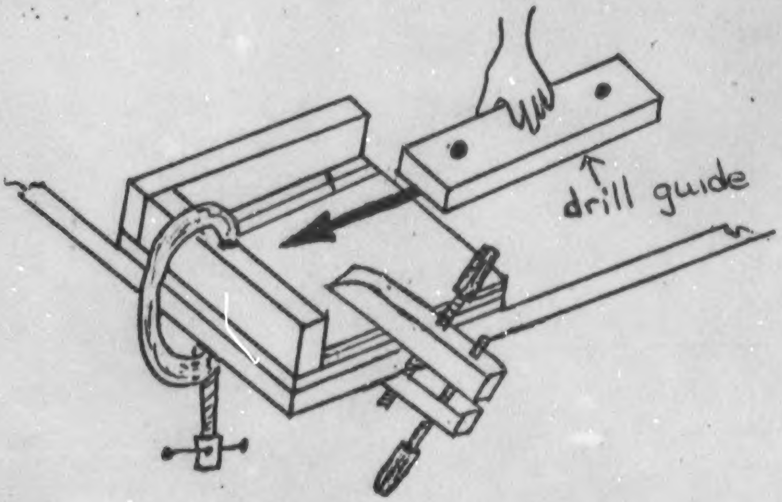


   c. Clamp fixture to corner of work table. Place both top and bottom of book cover into fixture. Be sure pencil lines are up and next to 2 x 4 wall.



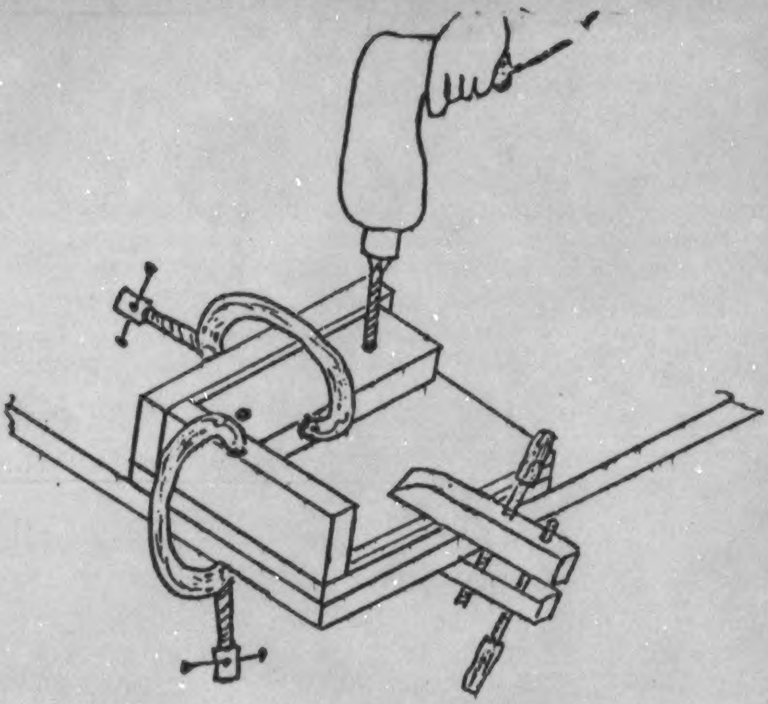


   d. Clamp book cover to fixture. Preferably use a wooden clamp.
   e. To make sure holes in cover are drilled straight and true, make a 2 x 4 drill guide. For holes in guide use the same measurements as the ones marked on the cover. Clamp drill guide over book cover.

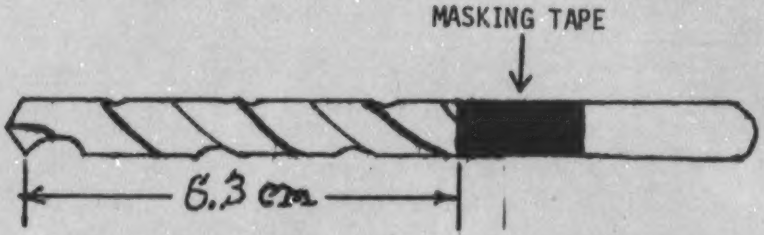


TIPS TO THE TEACHER - Continued

5. Tape will serve as a stop measurement. Drill down till the tape reaches the 2" x 4", keep drill motor running, and back drill bit out.



Select a 1/4" drill bit (if 2" x 4" drill jig is used). Measure up 6.3 cm from cutting tip of drill bit and wrap masking tape around the drill bit.



6. The holes may also be drilled without a jig, but is less reliable. Place a scrap piece of wood on the work table. (The scrap wood should be at least 30 cm by 30 cm and at least 2.5 cm thick.) Line up the cover top and bottom. Place them on the scrap wood, clamp down, and drill holes.

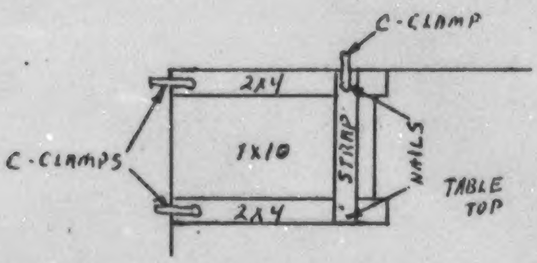
7. Have the room set up and tools out on tables the first day. At the end of the period, assign students to clean and put away tools. Those students should get out the same tools the next day.

PLEASE RECORD ALL BRAINSTORMS.

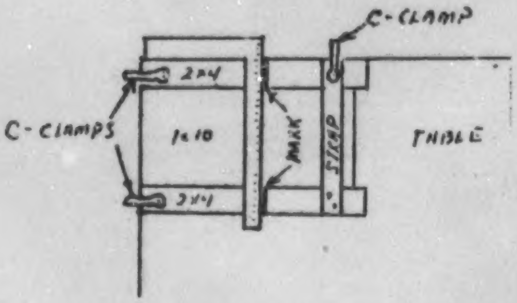
TIPS TO THE TEACHER Continued

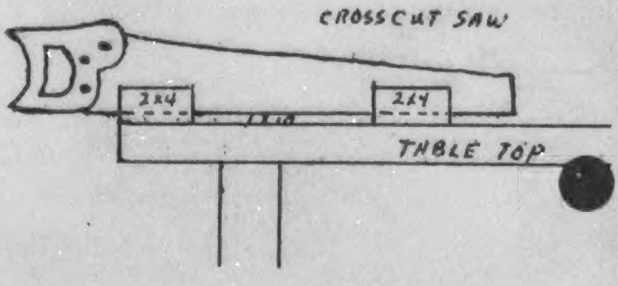
Make sawing jigs for boards used for book covers.

a. Toward the edge of the table clamp two 2 x 4 boards on each side of a 1 x 10 board. Nail a wooded strap across the loose ends of the 2 x 4 boards. Clamp the strap to the edge of the table.

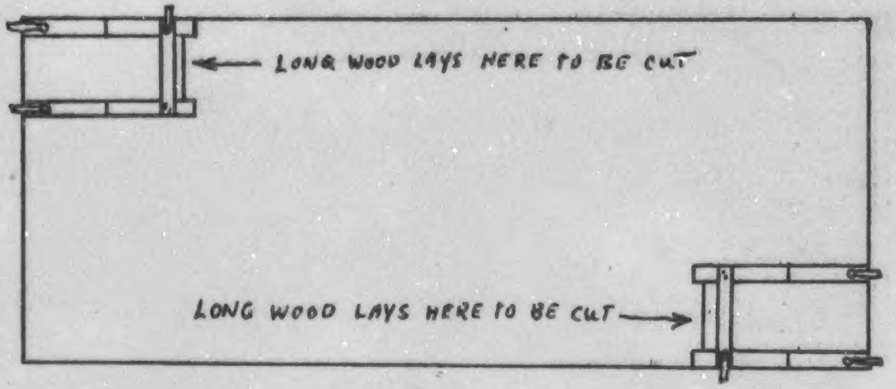

C-CLAMP
2x4
C-CLAMPS
1x10
STRAP
NAILS
TABLE TOP
2x4

b. Lay a framing square across both 2 x 4 boards and mark. Select a cross cut saw and cut both 2 x 4 boards, on the lines at the same time, Miter-box style. Stop sawing when saw scratches the 1 x 10 board. KEEP SAW FLAT.


C-CLAMP
2x4
C-CLAMPS
1x10
MARK
STRAP
TABLE
2x4


CROSSCUT SAW
2x4
1x10
2x4
TABLE TOP

c. To cut covers slip a long piece of wood in back of jig until cut line is directly under saw blade. Keep saw flat while sawing. Make two jigs and place at opposite corners of the table.


LONG WOOD LAYS HERE TO BE CUT
LONG WOOD LAYS HERE TO BE CUT

Dear Parent:

As part of our ABC/EE program your child will have the opportunity to participate in hands-on projects in Language Arts, Math, Social Studies, and Science. Your child may be working with basic hand tools, small electrical appliances and tools, wood burners, carving tools, and/or sewing machines.

We will demonstrate equipment and take all precautions for their safety. You may also help by talking with your child about safety in use of tools.

In order for us to have an awareness that you do have a knowledge of your child's activities, we must have your consent before allowing your child to use any equipment.

The attached permission slip must be signed in order for your child to participate in our activities.

You are welcome to visit our classroom at any time during ABC/EE activities. Please feel free to ask any questions concerning this program.

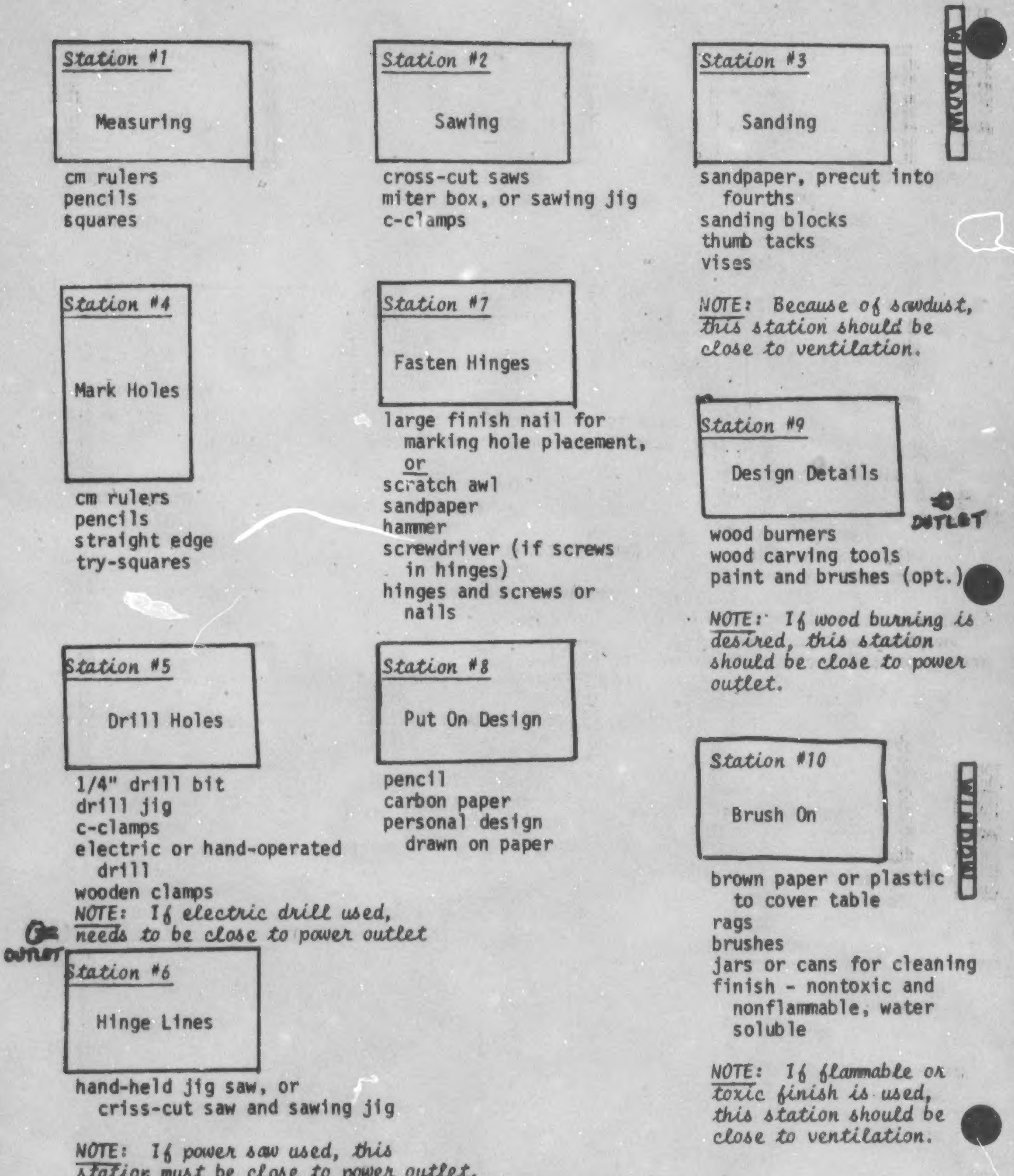
- -

I give my permission for ______________________________ to use the equipment and tools in the classroom ABC/EE activities.

____
(Parent or Guardian)

____
(Date)

Table Arrangement Sheet



Station #1

Measuring

cm rulers
pencils
squares

Station #4

Mark Holes

cm rulers
pencils
straight edge
try-squares

Station #5

Drill Holes

1/4" drill bit
drill jig
c-clamps
electric or hand-operated drill
wooden clamps

NOTE: If electric drill used, needs to be close to power outlet

Station #6

Hinge Lines

hand-held jig saw, or criss-cut saw and sawing jig

NOTE: If power saw used, this station must be close to power outlet.

Station #2

Sawing

cross-cut saws
miter box, or sawing jig
c-clamps

Station #7

Fasten Hinges

large finish nail for marking hole placement, or
scratch awl
sandpaper
hammer
screwdriver (if screws in hinges)
hinges and screws or nails

Station #8

Put On Design

pencil
carbon paper
personal design drawn on paper

Station #3

Sanding

sandpaper, precut into fourths
sanding blocks
thumb tacks
vises

NOTE: Because of sawdust, this station should be close to ventilation.

Station #9

Design Details

wood burners
wood carving tools
paint and brushes (opt.)

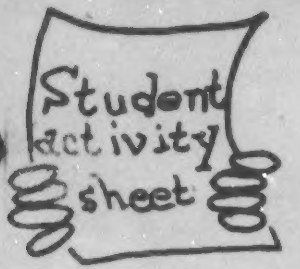
NOTE: If wood burning is desired, this station should be close to power outlet.

Station #10

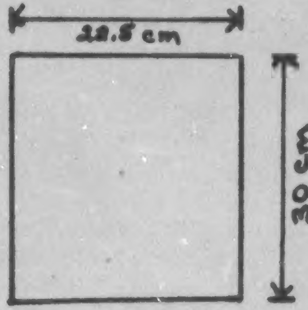
Brush On

brown paper or plastic to cover table
rags
brushes
jars or cans for cleaning
finish - nontoxic and nonflammable, water soluble

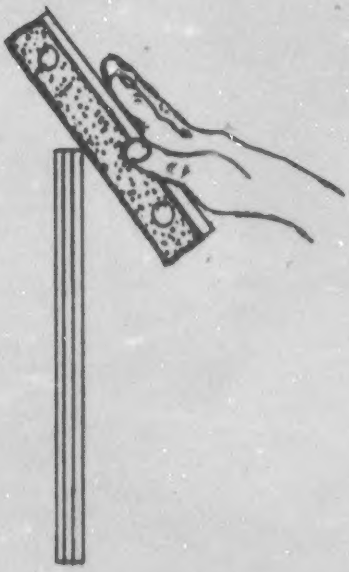
NOTE: If flammable or toxic finish is used, this station should be close to ventilation.

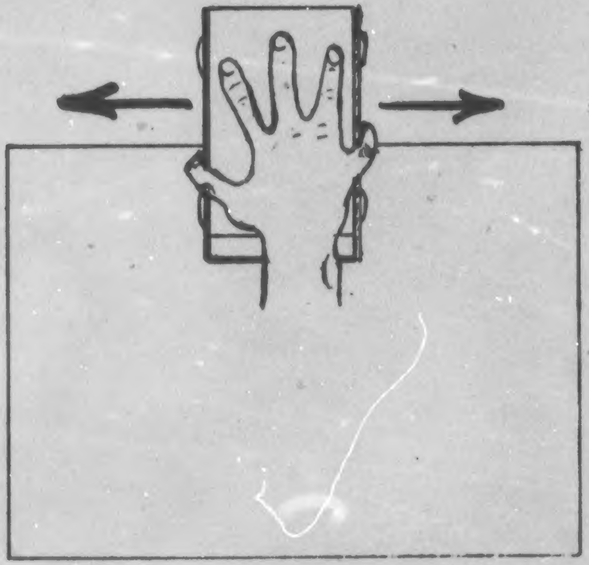

Student
activity
sheet

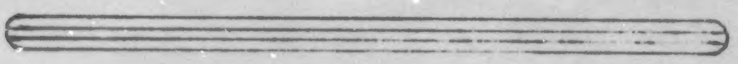
MAKING A BOOK COVER



1. Select wood. Mark for 2 pieces each 30 cm long.
2. Slide board in sawing jig to cutting line. Keep saw flat while sawing.
3. Immediately sand all edges to get rid of splinters
   Place one piece of wood at a time in the vise.







Hold sanding block at an angle to make edges rounded.

STUDENT ACTIVITY SHEET - Continued

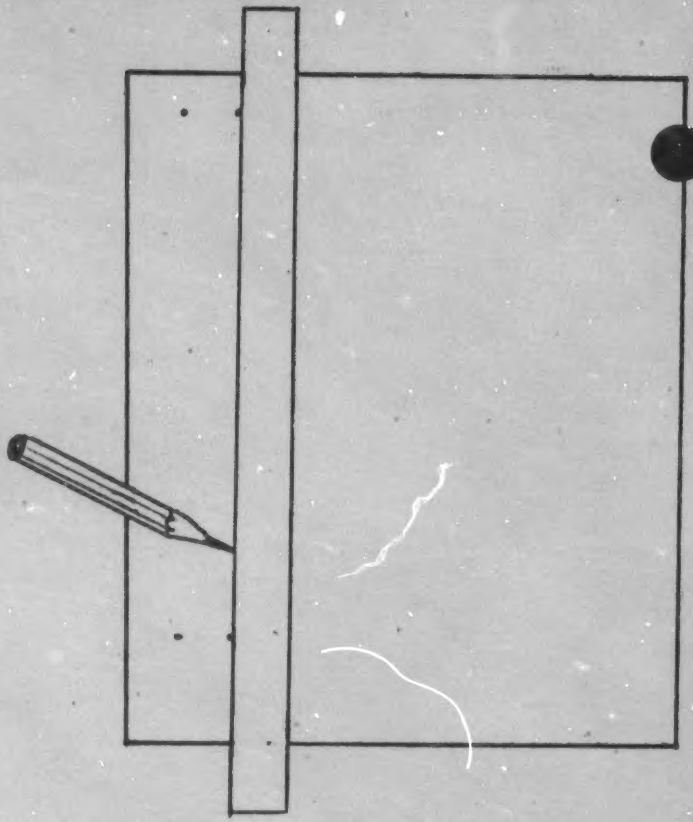
4. Select the best piece of wood for the front.

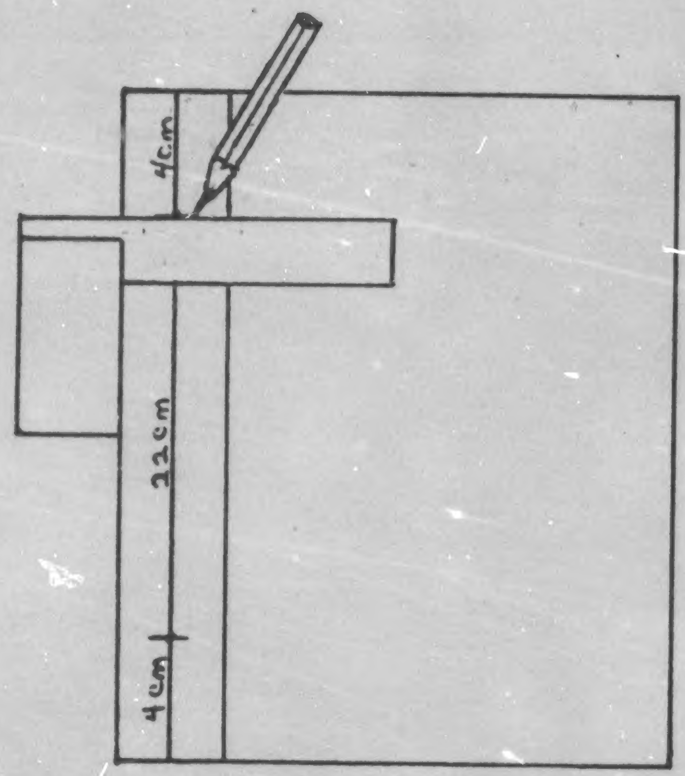
   From the left edge of the front close to the top, make a dot at 1.5 cm and at 3 cm.

   Repeat this measurement close to the bottom of the wood.

   Lay the ruler from 3 cm dot to 3 cm dot and draw a line from edge to edge.

   Draw another line on the 1.5 cm dots.





Lay the ruler along the 1.5 cm line and make a dot 4 cm from top edge of wood.

Repeat from the bottom.

Use a square to mark a line through both dots. These lines mark where the holes will be drilled.

Check your measurements.

STUDENT ACTIVITY SHEET - Continued

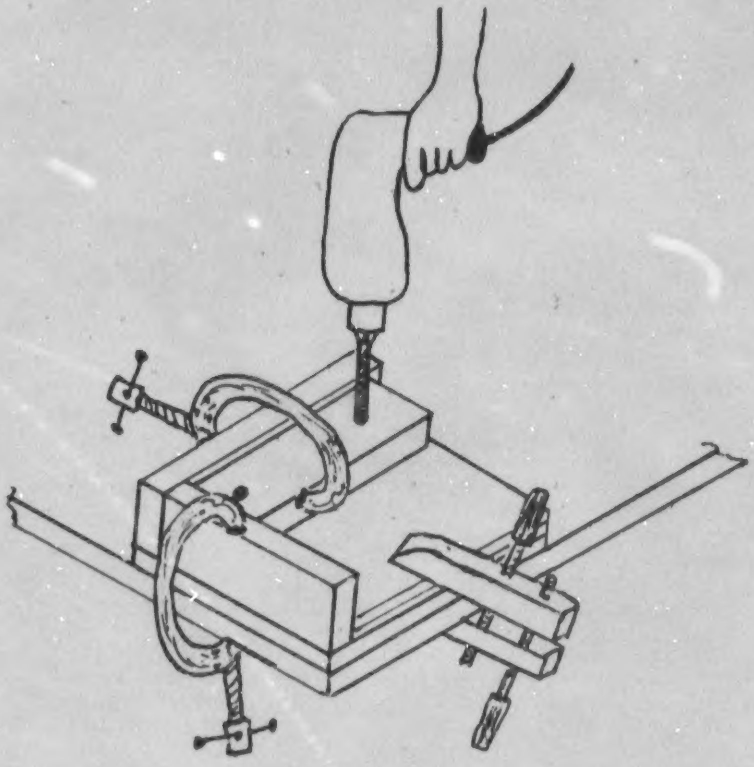
5. Put both pieces, front and back, together and prepare to drill holes.

   a. Wood must be drilled laying flat and lined up in drilling jig or on a thick piece of scrap wood.

   b. To keep front and back straight while drilling, use a wooden clamp that won't dent the wood.

   c. If using an electric drill, keep it running while backing out of the holes.

   d. Drill only until the holes are through the 2 cover pieces--not into the board below.



Are your book cover pieces line up so the edges are even?

Are the clamps tight?

Is there a piece of wood between your cover pieces and the table top?

STUDENT ACTIVITY SHEET - Continued

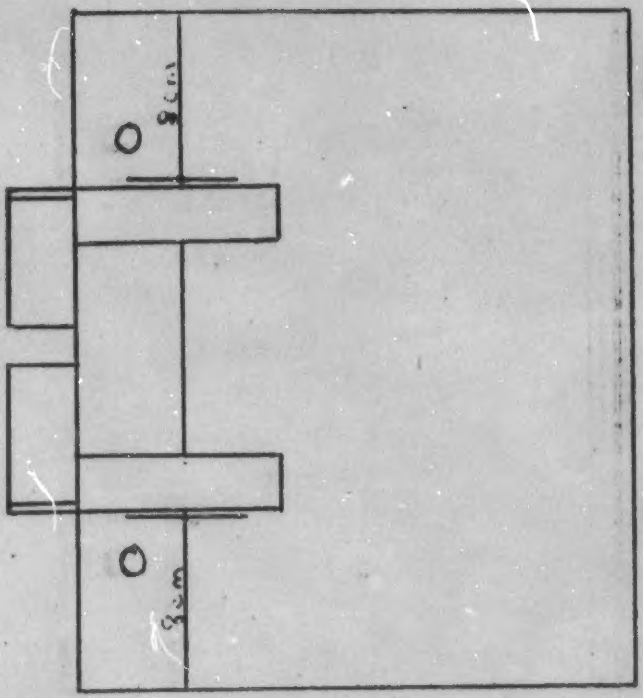
6. Measure down 8 cm from the top of the wood and make a dot on the 3 cm line.

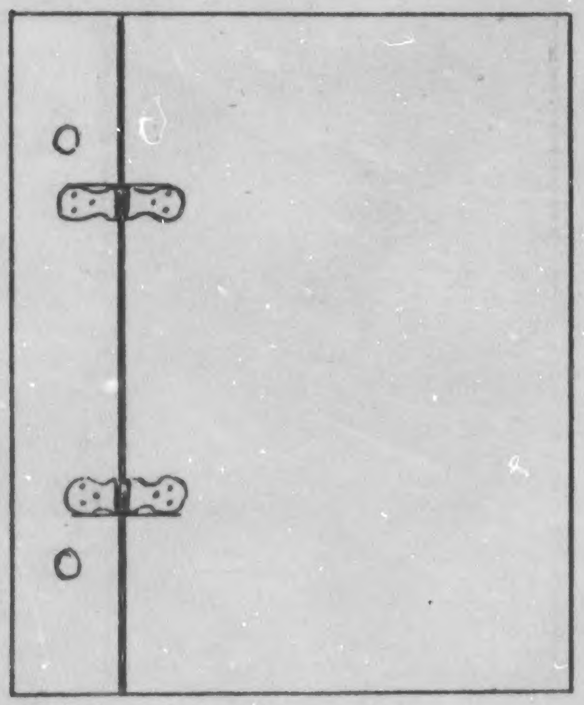
   Repeat the same measurement from the bottom of the wood.

   Using a square, mark a line across the 3 cm line at the dots at least 4 cm long. These lines will mark hinge placement.

   On the front only, saw down the center of the 3 cm line, completely separating the wood into two pieces.

   Immediately sand the rough edges.





7. Put the two front pieces together, lining up pencil marks.

   Lay hinges at inside edge of lines. Mark hinge holes with a sharp pointed tool, such as a nail.

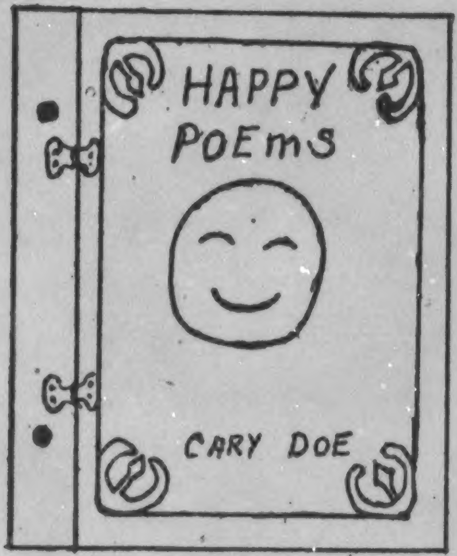
   Remove hinges and sand all pencil lines off the wood.

   Again, line up the two pieces of wood. Fasten hinges on to the front, matching punch marks.

STUDENT ACTIVITY SHEET - Continued

8. Draw cover design on paper.

Center carbon paper (carbon side on wood) on front of wood cover. Center design paper on carbon paper and trace design with pencil. Be careful not to move paper on carbon paper.



9. Wood burn design, following the carbon lines.

Sand all blemishes, such as carbon smudges and pencil lines.

10. Apply finish. Allow time to dry completely before putting the cover together.

Your book cover is now finished. Have fun writing and collecting stories, poems, and drawings. My plans for my book are:

____

____

____

____

____

Dear Parent:

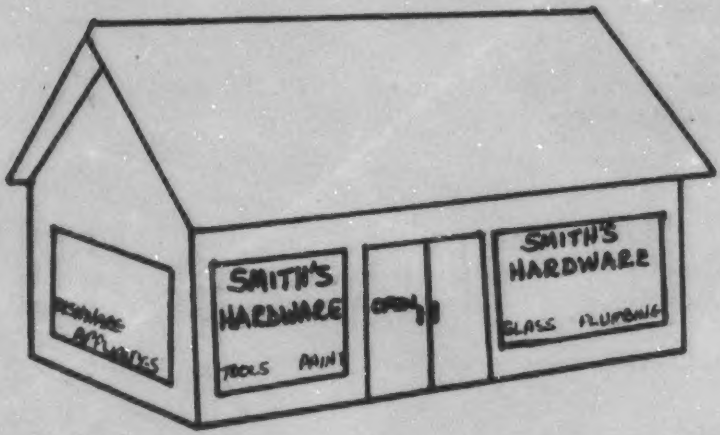
As a language arts and math activity, our class made wooden book covers. These are now being used with some treasured writings. The individual front cover design makes each cover personalized.

Each student had many measurements to make with the centimeter ruler to have the right size covers and correct placement of holes and hinges.

When making a trip to a lumber yard or hardware store, perhaps you can arrange for your child to go with you. The importance of accurate measurements, seeing marketing in action, and noting the various ways reading and writing are used will broaden classroom learnings.

Your child should enjoy telling you how the book covers were made and how they are using their book cover.

Thank you for your interest in our classroom work.



RESOURCE SHEET

FOR THE TEACHER:

A Bookful of Ideas For Your New Home. Tacoma, WA: American Plywood Association. (1119 A Street)

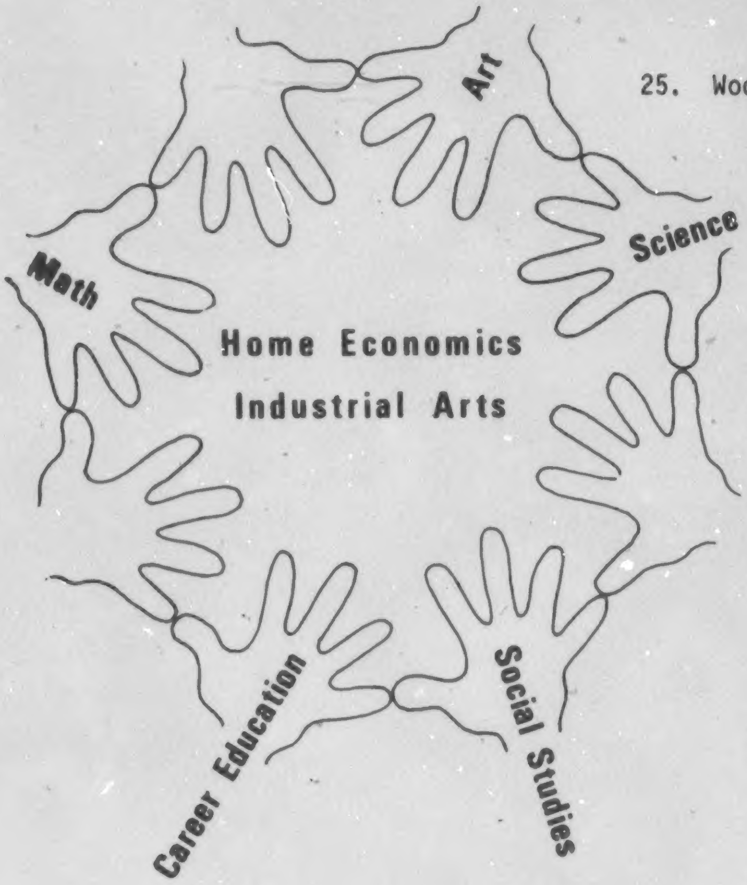
Forest USA. Washington, DC: American Forest Institute, 1974. (1619 Massachusetts Avenue NW)

"Inside Wood" Starting Points Learning Activity Poster. Learning Magazine, March, 1977.

The Story of Hardwood Plywood. Arlington, VA: Hardwood Plywood Manufacturers Association. (P.O. Box 6246)

JOT IT DOWN!

25. Wooden Candleholder


Art
Science
Math
Home Economics
Industrial Arts
Social Studies
Career Education

Hands-on Approach

wichita public schools
wichita, kansas

Activity Based Curriculum for Elementary Education

ACTIVITY TITLE:

Wooden Candleholder

AREA TITLES AND MAJOR CONCEPTS:

Art
- Principles of design
- Sketching
- Production of handicrafts

Science
- Experiments with candles

Math
- Metric linear measurement
- Center of square and rectangle

Social Studies
- Cultural traditions and celebrations
- Marketing

DESCRIPTION OF ACTIVITY AND ENRICHMENT:

Each student will construct a revolving wooden candleholder with metal screw-in candle cups. This activity will provide experiences in sketching, metric measuring, sawing, sanding, drilling, and applying finish.

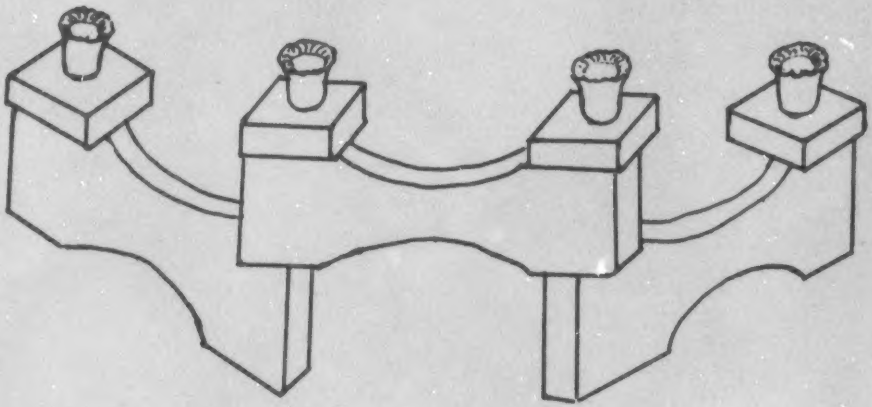
RELATED CAREERS:

Interior Decorator, Historian, Cabinetmaker, Marketing Researcher, Gift Shop Clerk, Commercial Artist

REQUIRED FOR THIS ACTIVITY:

The wood for the sides is precut to 6.5 widths from boards at least 1.5 cm thick. The top squares are made from wood precut 3.5 cm wide. The lengths will be cut by students.

Metal screw-on candle cups must be purchased from a craft shop.



SUPPLIES:

Softwood - 6.5 cm wide - each holder uses 53 cm in length
3.5 cm wide - each holder uses 11 cm in length
Sandpaper
Small finish nails (4 for each holder)
Pencils
Metal candle cups with screw base (2 or 4 each)
6 mm (1/4") dowel rod - 7 cm per holder
Masking tape
White glue
Finish such as Deft Woodarmor
Paper or plastic for finish table
Rags
Patterns for sides (page 10) cut from 1/4" plywood

EQUIPMENT:

Saber saws or coping saws
Vises
Hand drills (2) and electric drill (1)
Drill press or jig
Drill bit - 6 mm (1/4")
Try-squares
Centimeter rulers
Miter boxes
Cross-cut saws or back saws
Half-round files
Nail set
Straight edge
Side-cutting pliers
Hammers
Brushes
Dowel jig or fixture
C-clamps

cm, mm, m!
Go Metric

ACTIVITY PROCEDURES:

1. Introduce the candleholder activity. Each student should have a plain sheet of paper ready.

   You are living in early America. The only light you have in your home are candles. You need a candleholder. I have one you can use for a pattern. I will tell you about it.

   Draw a sketch of the candleholder as I describe it. This candleholder has three wooden legs. It holds four candles. Each leg has two curves, etc.

   Continue to describe the candleholder that will be made in class. Wait to show the candleholder until all the students have sketched one from your verbal description.

   Point out that each person mentally pictures something different from verbal descriptions. Sketching is an important first step for any production in order to clarify ideas. Sketching is very rough drawings that later will be refined.

2. Use Parent Letter (page 9) for permission to use tools.

3. Set up work stations using suggestions from Table Arrangement Sheet (page 11). Make station signs using numbers and titles.

4. Before working with the tools, identify the equipment, materials, and safety rules. Demonstrate steps that will require special techniques.

5. Have students read Student Activity Sheets (pages 12, 13, and 14) before beginning construction of candleholder.

6. Start just a few students at a time at Station 1. Have some students start at Stations 9 and 10 before going to Station 1.

7. While waiting to start or after finishing activity, have students make a sketch(es) and write an explanation of a hand-crafted item that they would like to make to sell. (Hand-crafted would be anything not made on an assembly line).

   Why would you enjoy making this? Who would be your customers? How many could you produce in a year? What would it cost to produce this? What tools would be needed?

   Encourage more imagination rather than practicability in designs and plans. It should be an item related to their current interests; such as sports, cars, horses, etc.

ACTIVITY PROCEDURES - Continued

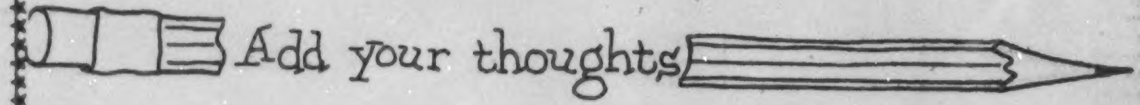
8. Have a classroom showing of the sketches of hand-crafted items the class members would like to produce themselves. Have students describe the product and report on some of their hypothetical plans.

   Discuss the ways these various products could be marketed; such as a department store, speciality shop, magazine advertisement, traveling salesman, home parties, etc.

   Have class members vote on the top three items according to the demand by their age group. With the top three, run a market survey in another classroom. Each would be asked: *Would you buy this item if it was available on the market?* Have students figure the percentage of the neighboring classroom that would buy each product. Make a bar graph to show marketability.

   Sketching and market demand are two important areas in developing new products.

9. Send home Parent Letter (page 15) for description of the activity and enrichment.



FOLLOW UP IDEAS:

Use a string to measure around classroom objects to find the circumference in centimeters and millimeters.

Measure the "giant" step of 5 friends in centimeters.

Research and plan short skits depicting cultural traditions or celebrations. What part do "lights" play in celebrations?

Conduct an experiment to illustrate that fire needs "air" to burn. Secure a short candle in the center of a large bowl. Pour 2 cm of water into the bowl. Color the water with food coloring. Light the candle. Invert a pint jar over the candle until flat on the bottom of the bowl. As the candle uses the oxygen in the air, the water goes up in the jar.

Have a demonstration on candle making. Discuss safety in making and using candles. Use styrofoam egg cartons or one-half pint milk cartons for individual molds.

Explore the demand for hand-crafted items. *Is there a demand for skilled handwork today? Why? Compare this to the demand in early America.* Do library research on what was hand-crafted in colonial days.

What products can you buy today that are not made on an assembly line? Do field research to develop a classroom list.

EVALUATION:

For increased awareness and knowledge gained, use open ended questions such as:

Wood is:

Measuring was:

My favorite part of the candleholder activity was:

Making hand-crafted items is:

I learned that:

HEALTH AND SAFETY PROCEDURES:

1. Use long, slow steady strokes in sawing.
2. Always wear safety glasses when using power or hand tools.
3. Store all dirty rags in sealed metal container.
4. Keep nails, screws, and tacks out of your mouth.
5. Never use a file without a handle.
6. Beware of saw teeth. They are sharp.
7. Disconnect the plug before changing the bit in the electric drill. Tighten chuck securely on drill before operating.
8. Place the sanding work station near ventilation.
9. Be sure every student has permission from home to work with tools.
10. Demonstrate safety procedures in each work station.

JOT IT DOWN!

TIPS TO THE TEACHER:

1. If finished lumber is not used, power sand sides of sections between steps 5 and 6.

2. Mark drill bit with masking tape to assure correct depth of holes in legs.

3. In advance, cut patterns for marking curves. Quarter-inch plywood makes a good template. Pattern on page 10 .

4. Option for step 1 of Student Activity Sheet, if measuring is not part of the desired learnings, is to clamp a stop on miter box 17 mm from saw blade.

5. Discuss in advance how to find the center of a square or rectangle by drawing two lines diagonally from corner to corner. This is used at Station #7 and Station #10.

6. Tell the students that when marking the boards, make fine lines with a sharp pencil. The 2 mm lines are for saw waste.

7. Use finish nails to drill holes at Station #10. Use side cutters to cut off head of the nail. (CAUTION: Aim head away from face when cutting.) The nail used for drilling the hole for the candle cup screw should be as large as the core (without threads). The hole for the finish nail can be drilled with the same size finish nail.

8. Make a sign for each Work Station, using number and description from Table Arrangement Sheet (page 11).

9. To eliminate some waiting for Station #1, have a few students complete steps 9 and 10 before going back to Work Station #1.

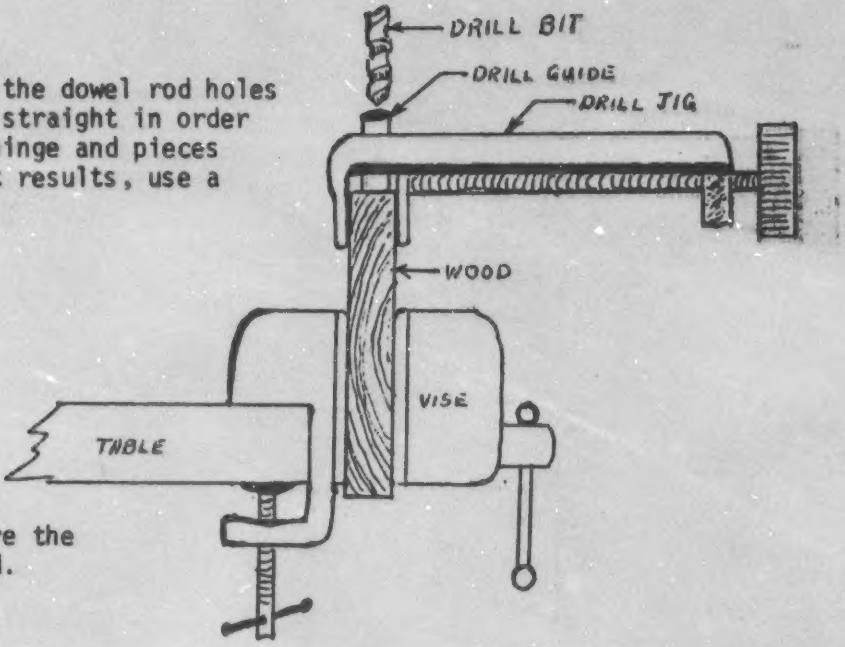
10. To sand flat surfaces on the legs and squares, tape sandpaper to the work table.

11. If a student is having difficulty sawing, clamp the wood in the miter box with a wooden clamp.

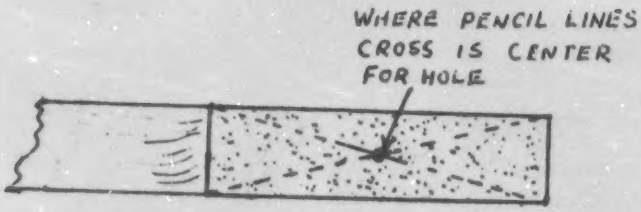
12. At Station #11, have examples for students to see placement of squares on the legs. On leg #1, turn over with the two holes down and put on two squares. Legs #2 and #3 each have one square with holes on other end up.

USING A DOWEL JIG:

It is essential to drill the dowel rod holes (Station #7), square and straight in order for the rod to act as a hinge and pieces stand straight. For best results, use a tool called a dowel jig.

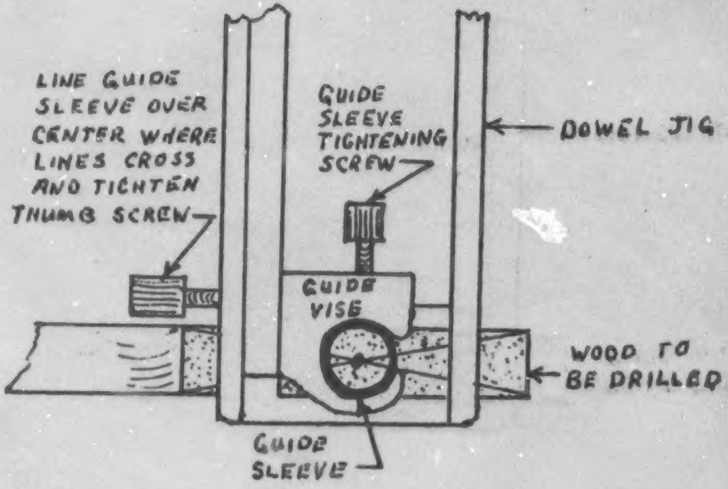

DRILL BIT
DRILL GUIDE
DRILL JIG
WOOD
VISE
TABLE

a. Mark on the wood where the hole is to be drilled.


WHERE PENCIL LINES CROSS IS CENTER FOR HOLE

b. Select a 1/4" guide sleeve for the dowell jig if using a 1/4" drill bit. Fasten in with inner sleeve screw.

c. Line jig up directly over mark on wood. Tighten in place with outer thumb screw.


LINE GUIDE SLEEVE OVER CENTER WHERE LINES CROSS AND TIGHTEN THUMB SCREW
GUIDE SLEEVE TIGHTENING SCREW
DOWEL JIG
GUIDE VISE
WOOD TO BE DRILLED
GUIDE SLEEVE

d. For a straight hole, check to be sure drill guide sleeve is square on the wood.

e. Use masking tape on drill bit for guide to hole depth.

Dear Parent:

As part of our ABC/EE program your child will have the opportunity to participate in hands-on projects in Language Arts, Math, Social Studies, and Science. Your child may be working with basic hand tools, small electrical appliances and tools, wood burners, carving tools, and/or sewing machines.

We will demonstrate equipment and take all precautions for their safety. You may also help by talking with your child about safety in use of tools.

In order for us to have an awareness that you do have a knowledge of your child's activities, we must have your consent before allowing your child to use any equipment.

The attached permission slip must be signed in order for your child to participate in our activities.

You are welcome to visit our classroom at any time during ABC/EE activities. Please feel free to ask any questions concerning this program.

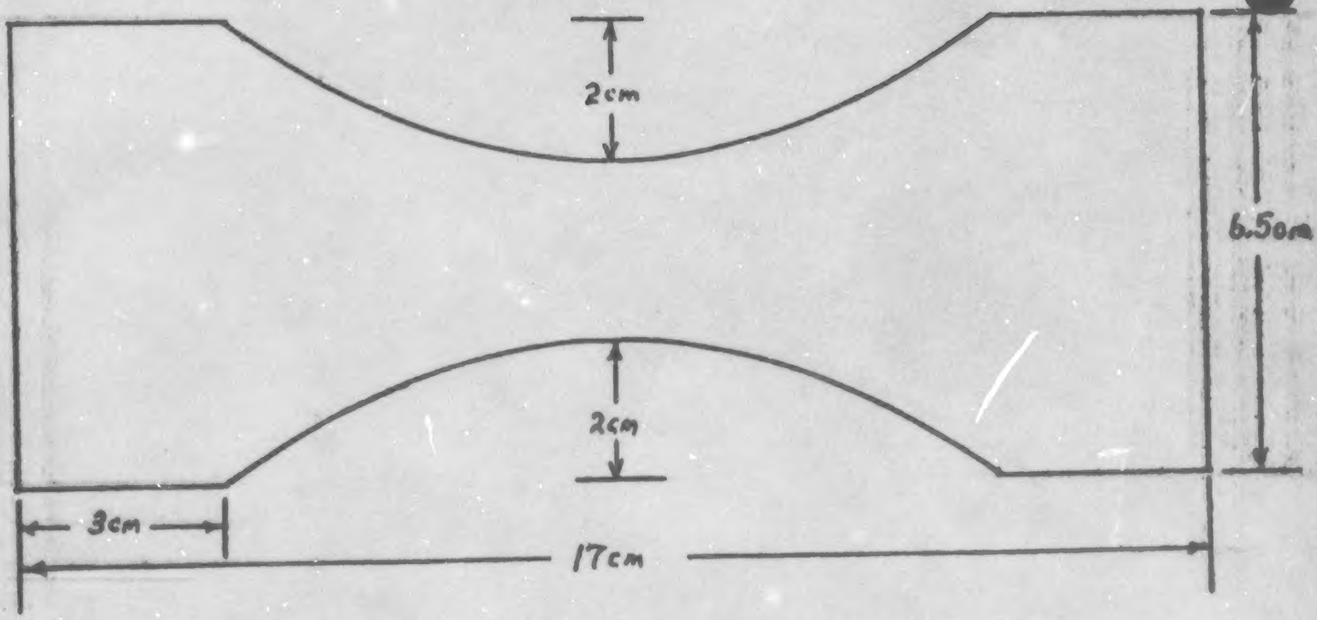
I give my permission for ______________________________ to use the equipment and tools in the classroom ABC/EE activities.

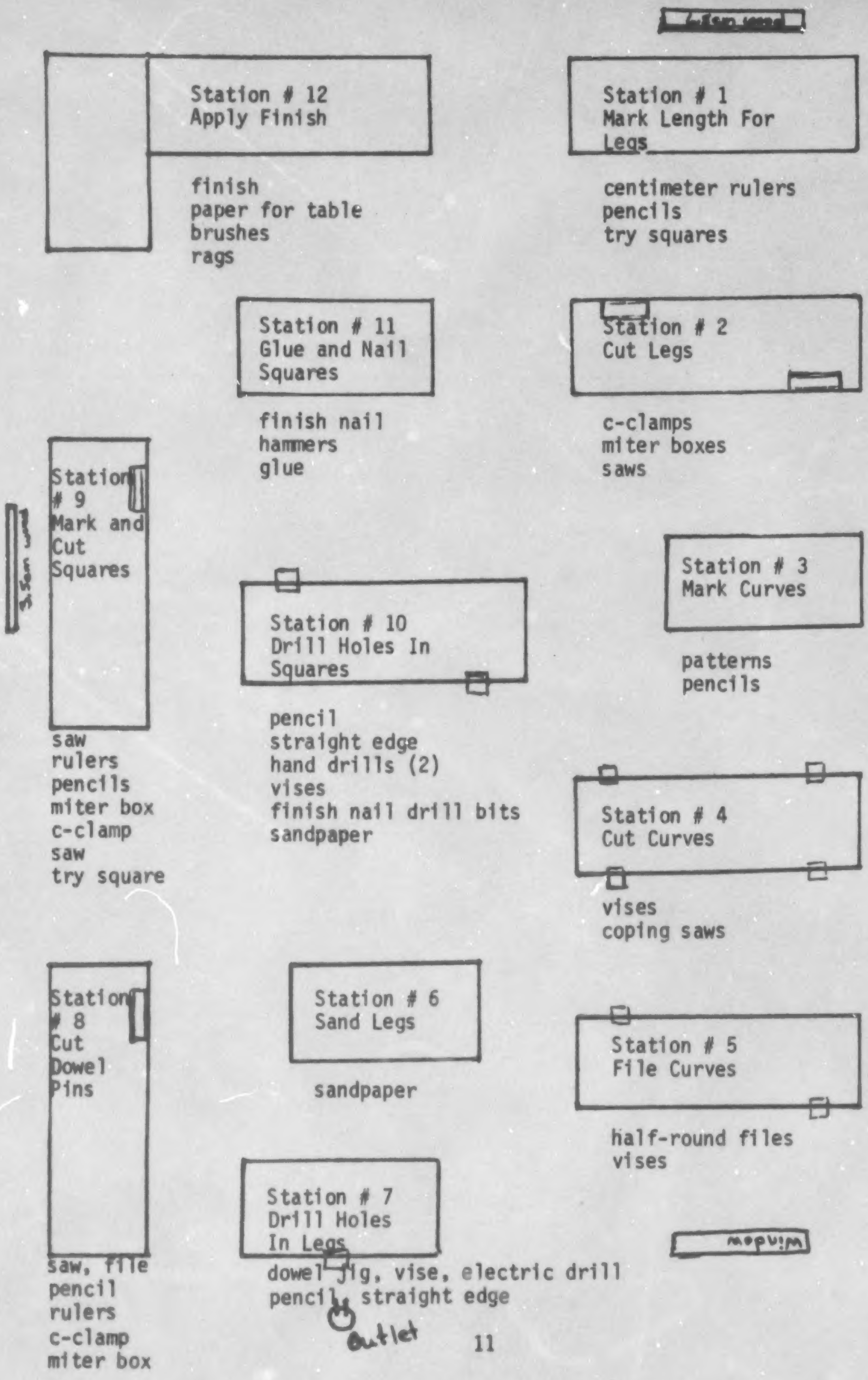
____
(Parent or Guardian)

____
(Date)

PATTERN FOR TEMPLATE

Glue paper template to a piece of cardboard. Cut out template and transfer pattern to at least four pieces of 1/4" plywood. Place wooden templates at Work Station # 3.





Station # 1
Mark Length For Legs

centimeter rulers
pencils
try squares

Station # 2
Cut Legs

c-clamps
miter boxes
saws

Station # 3
Mark Curves

patterns
pencils

Station # 4
Cut Curves

vises
coping saws

Station # 5
File Curves

half-round files
vises

Station # 6
Sand Legs

sandpaper

Station # 7
Drill Holes
In Legs

dowel jig, vise, electric drill
pencil, straight edge

Station # 8
Cut
Dowel
Pins

saw, file
pencil
rulers
c-clamp
miter box

Station # 9
Mark and
Cut
Squares

saw
rulers
pencils
miter box
c-clamp
saw
try square

Station # 10
Drill Holes In
Squares

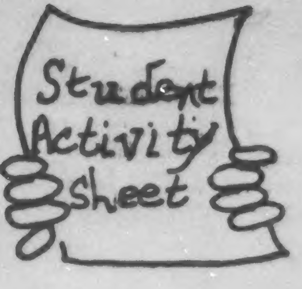
pencil
straight edge
hand drills (2)
vises
finish nail drill bits
sandpaper

Station # 11
Glue and Nail
Squares

finish nail
hammers
glue

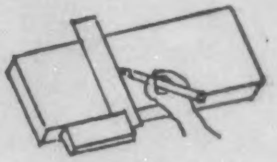
Station # 12
Apply Finish

finish
paper for table
brushes
rags

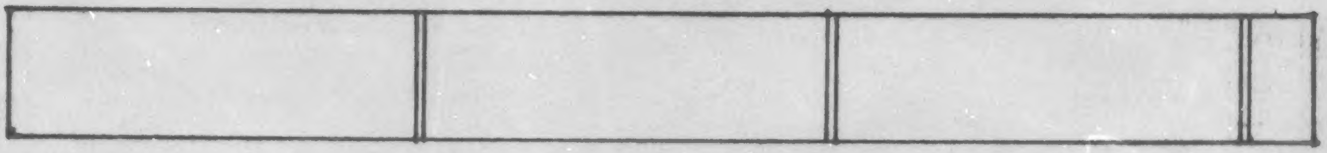


CANDLEHOLDER

1. Select a board that is 6.5 cm wide.

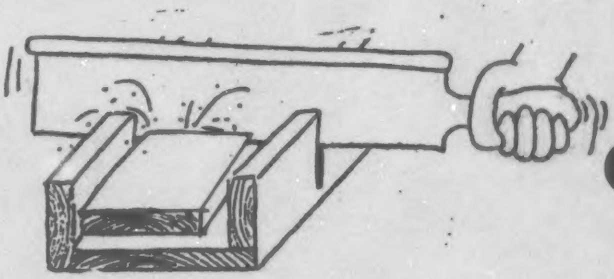


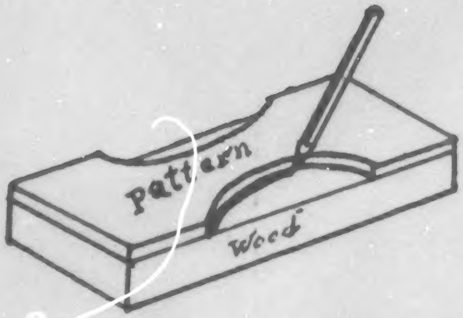
   a. Measure 11 cm from the end. Mark a line across the board using a try-square.
   Measure 2 mm from the first line and mark.



   b. Repeat measuring and marking as above, until you have marked three pieces.

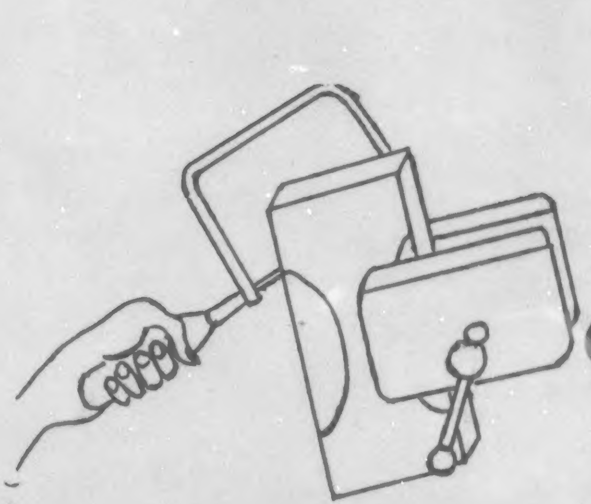
2. At Station #2, place wood in miter box.
   Saw between each 2 cm line.



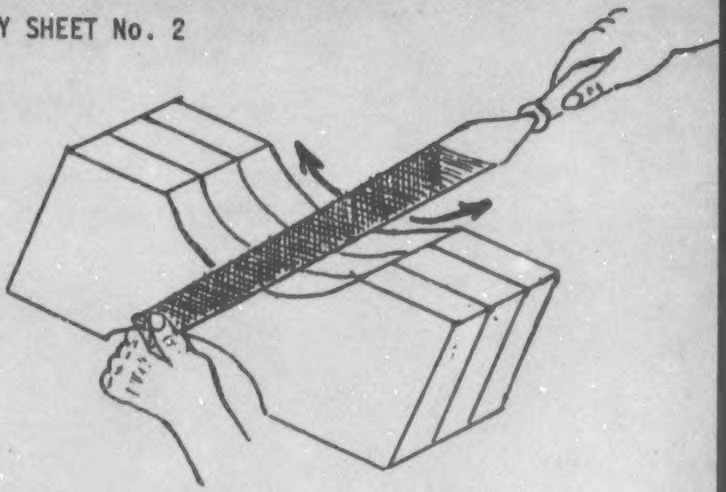


3. Take your boards to Station #3, mark curves. Using the pattern, mark the curves on all three boards.

4. Take boards to Station #4. Saw curves on each board with a coping saw.



STUDENT ACTIVITY SHEET No. 2



5. Take your candleholder legs to Station #5.

   a. Put the three legs together. Check with a square to be sure the ends and tops are even. Clamp them together in a vise.

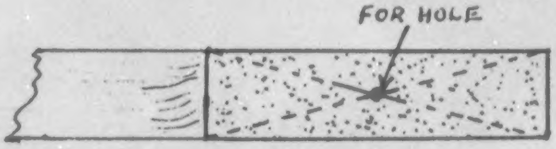
   b. Using a half-round file, smooth curves evenly.

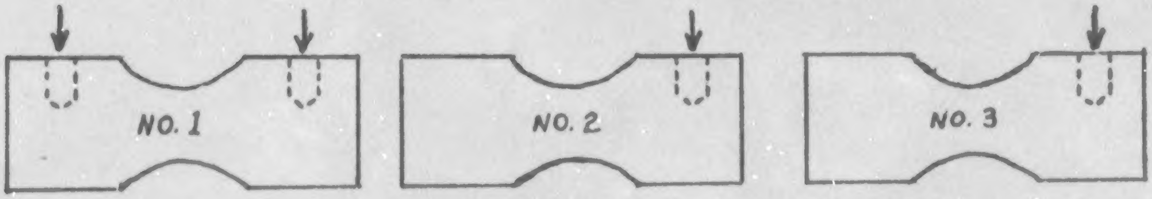
   c. Turn and file bottom curves, being sure ends stay straight while turning.

6. At Station #6, sand each leg individually. Sand all sides and edges.

7. Go to Station #7 to drill holes in legs for dowel rod hinges.

   a. Mark the centers for drilling. Drill two holes in the center leg and one hole in each side leg.





   b. Line up jig directly over the mark. Tighten in place. Check to be sure guide sleeve is square to the wood.

   c. Drill holes, using masking tape on bit as a guide to the depth of hole.

8. Go to Station #8. Measure and saw dowel rod 3.5 cm long. Cut two.

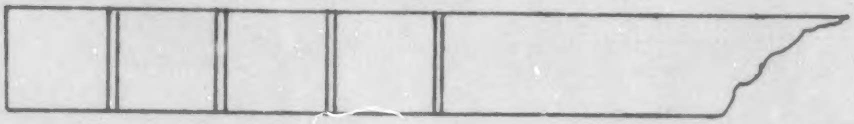
   a. Round ends of both dowel pins with a file.

   b. Place dowel pins in legs 2 and 3. CAUTION: Do not glue dowels--they are "hinges."

STUDENT ACTIVITY SHEET No. 3

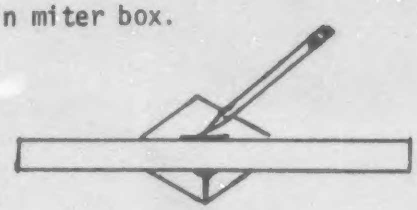
9. Go to Station #9. Get a board that is 3.5 cm wide.

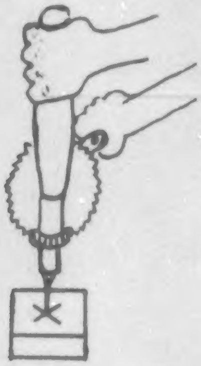
   a. Measure 3.5 cm from the end. Mark a line across the board with a try-square. Make a 2 mm mark for saw waste.



   b. Repeat measurements for four squares. Saw in miter box.

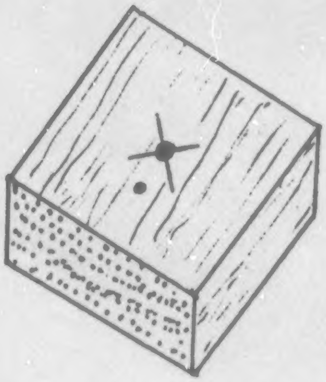
10. Go to Station #10. Find the center of each square block by laying a straight edge ruler from corner to corner. Make small marks.





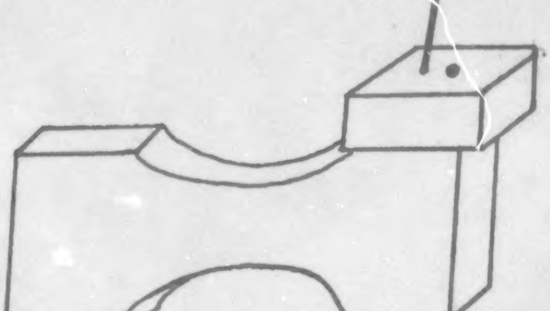
   a. Holes are drilled with a large finish nail with the head cut off. Drill a hole for the candle cup where lines cross.

   b. In the direction of the wood grain, drill a second hole the same diameter as the finish nails to be used. This should be 1 cm from the center hole.



   c. Sand off pencil marks and the edges of squares. Check candleholder legs for finish sanding needed.

11. At Station #11, glue and nail squares to legs. Put small amount of glue on bottom of block. Put finished nail hole toward curved cut out of leg. Drive nail flush with top of block. Take nail set and countersink nail.



12. Remove dowel pins before applying finish. Let dry completely before assembling candle holder.

Dear Parent:

As an activity in social studies, math and art, candleholders were hand-crafted in our classroom. Class members should now have more appreciation for fine hand-crafted products. Your child can tell you about the steps in making their candleholder. All the measuring was done in metrics. Sketching of ideas was encouraged in this activity.

An arts and craft fair would be a good place to visit with your child to see some of the types of hand-crafted products made today. A small production plant that does not work on assembly-line basis would be another good example of individualized skills.

Thank you for your interest in your child's classroom activities.

RESOURCE SHEET

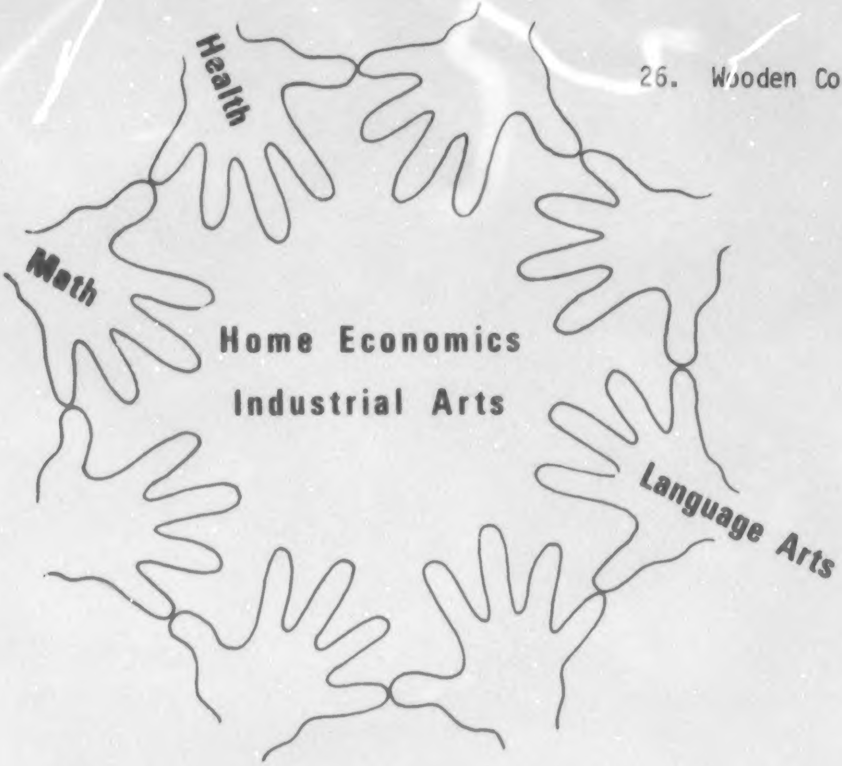
FOR THE TEACHER:

Fiarotta, Phyllis and Noel Farotta. The You and Me Heritage Tree: Ethnic Crafts For Children. New York: Workman Publishing Co., 1976.

Hallamore, Elisabeth. The Metric Book of Amusing Things To Do. Woodbury, NY: Barrons Educational Services, Inc., 1974. (113 Crossways Park Drive).

Purdy, Susan. Festivals For You To Celebrate: Facts, Activities, and Crafts. New York: J.B. Lippincott Co., 1969.

26. Wooden Coasters

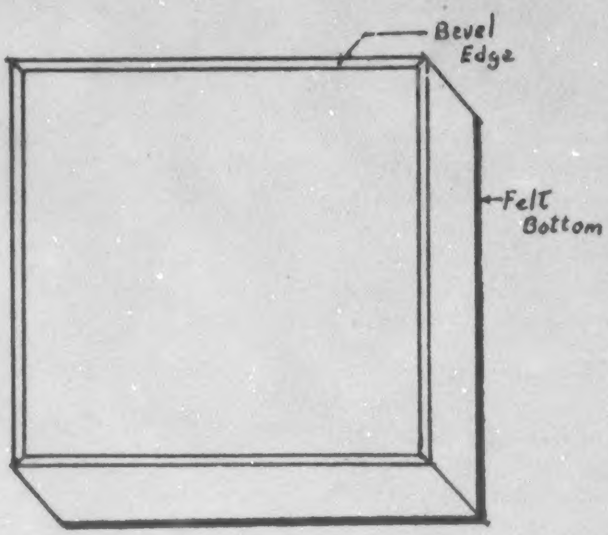

Health
Math
Home Economics
Industrial Arts
Language Arts

Hands-on Approach

wichita public schools
wichita, kansas

Activity Based Curriculum for Elementary Education

ACTIVITY BASED CURRICULUM FOR ELEMENTARY EDUCATION



ACTIVITY TITLE:

Wooden Coasters

AREA TITLES AND MAJOR CONCEPTS:

Health
  Safety with tools

Math
  Metric linear measurement
  Geometry - shapes

Language Arts
  Reading skills
  Listening skills
  Following directions

DESCRIPTION OF ACTIVITY AND ENRICHMENT:

Each student will measure in centimeters and saw wooden squares to make a set of coasters. The coasters will be backed with a square of felt cut by the student.

RELATED CAREERS:

Interior Decorator, Gift Shop Clerk, Forester, Fabric Factory Worker

REQUIRED FOR THIS ACTIVITY:

The wood for this activity is to be precut to 8 cm widths. The wood for the coasters must be a softwood. The best type is a decay-resistance wood, such as redwood, red cedar, or teakwood.

SUPPLIES:

Softwood wood (precut 8 cm wide) - 33 cm length per student
Sandpaper
Masking tape
Pencils
White glue
Felt pieces - various colors
Patterns for felt squares - heavy cardboard cut in 7.5 squares
Markers - permanent fine-line

EQUIPMENT:

Centimeter rulers
Crosscut saws
Miter boxes
C-clamps
Wooden clamps
Scissors - sharp for felt
Try-squares

ACTIVITY PROCEDURES:

1. Introduce the activity. Write the word "coaster" for students. Show an example of the coasters that will be made in class. *How will these coasters be used? What are other meanings for the word "coaster?"*

2. Conduct a centimeter measuring session. Instruct students, with a partner, to measure the length and record measurements to the closest centimeter of given objects such as a book, one of their fingers, a pencil, a crayon, and a shoe.

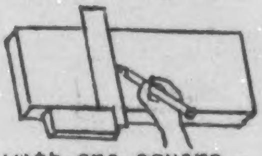
3. Show the tools that will be used, and have students name them. Demonstrate, using the saw with both hands. Discuss other safety rules for tools.

4. Send home Parent Letter (page 6) for permission to work with tools.

5. Set up room for the activity. Six work stations are needed. See Work Station table sheet and signs on pages 7 to 12 . Make the signs on poster board to stand in the center of each work station.

6. Have class members read the Work Station signs in advance of the activity to become acquainted with new words.

7. Demonstrate measuring and marking a board with a try-square



8. Students will start at Station #1 and progress to Station #6 with one square to complete a coaster before starting a second one. They will repeat this process for each coaster they make. Start students in small groups at Station #1. As a group moves to Station #2, start a second group.

9. If the coasters are to be a gift, stack coaster, wrap, and tie with ribbon or yarn. Give the length of the ribbon to cut in centimeters. Have students make a gift card, giving the dimensions in centimeters.

10. Send home Parent Letter #2 (page 14) to explain the activity and enrichment.

PLEASE RECORD ALL BRAINSTORMS.

FOLLOW UP IDEAS:

Make a classroom list of things made from wood. Have children to look in magazines for additional ideas. Add to the list later as children discover unfamiliar wood products.

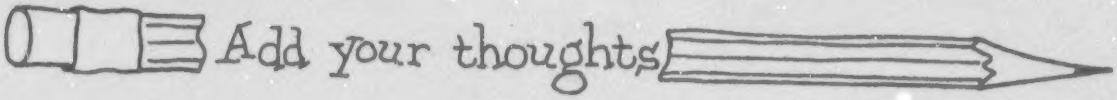
Invite a person that works with woods to tell the class about what they do.

Continue practicing in measuring common objects to the nearest centimeter. Have the leader for the day name a new object to measure that day.

Place new words from the Work Station signs on flash cards. Have a "Do You Know" game for a five-minute review session.

Make an occupation tree. Use a branch from a tree. Have each student find a picture of a person at work. Back picture with construction paper and write on it the worker's job and a "tool" they use. Hang the picture on the branch with yarn. *How many workers use something made from wood for their job?*

Make a list of some of the tools used for "super-duper" spelling words.



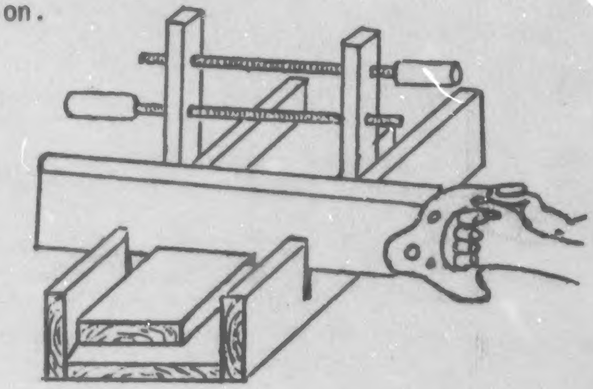
EVALUATION:

Use the Evaluation Sheet (page 13) to check students' ability to measure in whole centimeters. Have them to measure the longest part of the picture to the nearest centimeter.

Each of the objects on the Evaluation Sheet (page 13) is used in the coaster activity. After the students have completed the sheet, use it for oral evaluation on safety in using each item pictured.

HEALTH AND SAFETY PROCEDURES:

1. Always wear safety glasses when using hand tools.
2. Make sure every student has permission from home to work with tools.
3. Place the sanding table near ventilation.
4. Be sure the miter boxes are clamped tightly to the table top. Use a wooden clamp to secure the wood to be sawed in the miter box.
5. Instruct students to use longer, steady strokes instead of short, choppy ones. Have students to saw with both hands on the saw handle. This prevents cuts or hands getting in the way of the saw and makes sawing easier.



6. Tools are not toys. Tools are safe when handled correctly but are dangerous when handled carelessly.

TIPS TO THE TEACHER:

1. Inquire about scraps of wood at specialty cabinet or mill workshops. A custom boat builder would have ideal scraps. The wood must be softwood, and preferably decay-resistant with a natural, dark color. Veneers and plywood are not good choices for coasters because of the moisture from glasses.
2. Lay sheets of sandpaper on the table top of Work Station #3. Fasten down with masking tape.
3. Ask parent volunteers to work in the classroom during the activity. Instruct the volunteers to give directions and encouragement, enforce safety actions, and help the child that is having difficulty without doing the work for them. You may wish to assign the volunteer to one work station.
4. After sanding smooth, have the students hold the wood square at an angle to sandpaper for a slightly beveled top edge.

WOODEN COASTERS [illegible]TATIONS

Tables	Equipment and Supplies
1. Mark a line at 8 cm	Soft wood - precut 8 cm wide Centimeter rulers Rulers Try-squares
2. Saw the board	Miter boxes Crosscut saws C-clamps Wooden clamps
3. Sand the square	Sandpaper Masking tape
4. Trace a square on felt. Cut it out	Felt pieces Cardboard patterns - 7.5 cm square Permanent fine-line markers Sharp scissors
5. Write your name neatly on the felt	Permanent fine-line markers
6. Glue felt to the bottom of the wood	White glue

Dear Parent:

As part of our ABC/EE program your child will have the opportunity to participate in hands-on projects in Language Arts, Math, Social Studies, and Science. Your child may be working with basic hand tools, small electrical appliances and tools, wood burners, carving tools, and/or sewing machines.

We will demonstrate equipment and take all precautions for their safety. You may also help by talking with your child about safety in use of tools.

In order for us to have an awareness that you do have a knowledge of your child's activities, we must have your consent before allowing your child to use any equipment.

The attached permission slip must be signed in order for your child to participate in our activities.

You are welcome to visit our classroom at any time during ABC/EE activities. Please feel free to ask any questions concerning this program.

- -

I give my permission for ________________________________ to use the equipment and tools in the classroom ABC/EE activities.

____
(Parent or Guardian)

____
(Date)

Mark a line

at 8 cm.

2

Saw the board.

3

Sand the square.

4

Trace a square on felt. Cut it out.

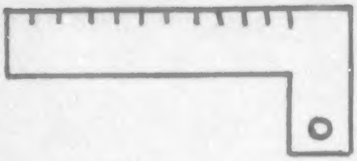
5

Write your name neatly on the felt.

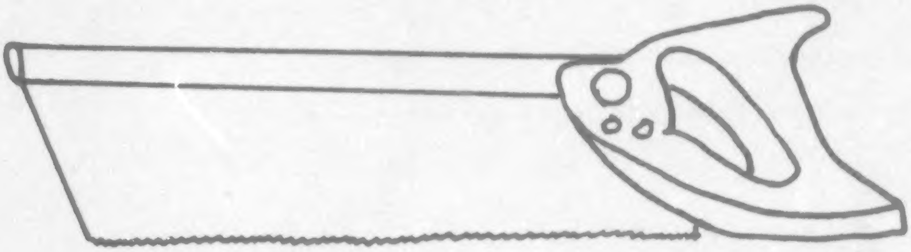
6

Glue felt to the bottom of the wood.

HOW LONG?



___ cm



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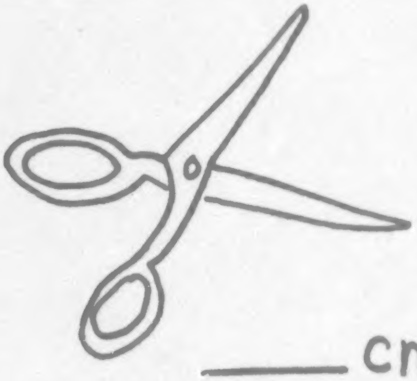
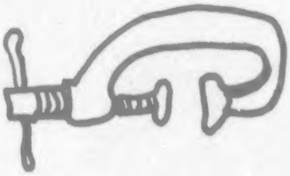


___ cm



___ cm

___ cm

Dear Parent:

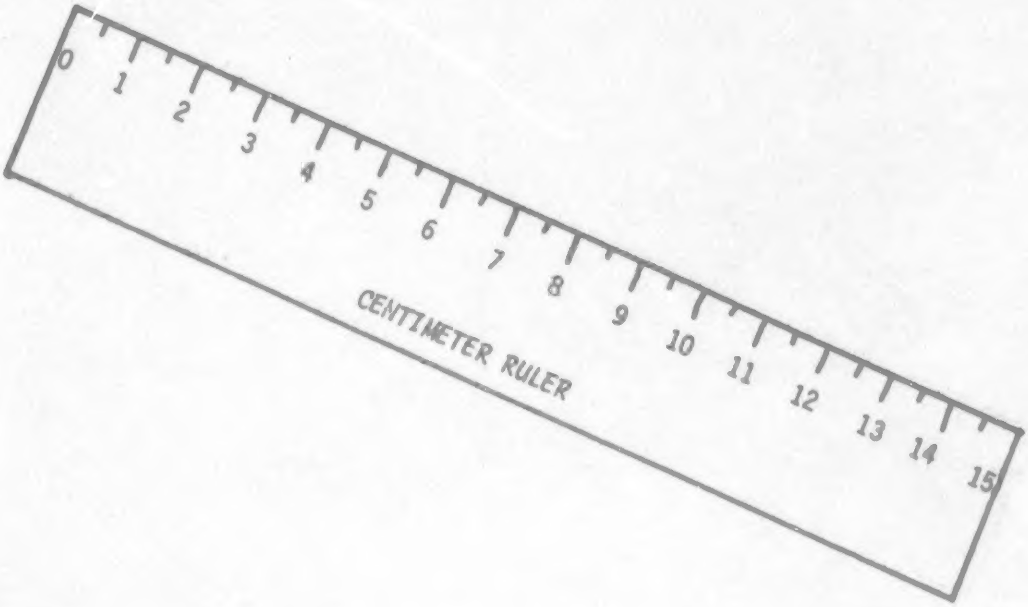
As an activity for math, language arts, and safety, we made wooden coasters in class. Each student measured the wood in centimeters, sawed and sanded their squares, and cut the felt for the coasters.

Your child will enjoy telling about how we made the coasters.

New words were learned by reading the directions at each work table. Safety in using tools was emphasized.

Planning and working on fun experiences in reading and simple measuring with at home will expand our classroom learnings. An added benefit is the good feelings from doing things together.

Thank you for your interest in your child's classroom work.



RESOURCE SHEET

FOR THE TEACHER:

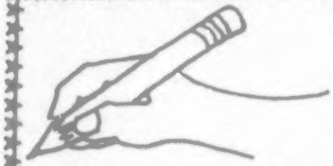
Arthur, Frances and Marlene Carrington. Metrics: How To Begin Making Metrics Live For Students and Teachers. Englewood Cliffs, NJ: Prentice-Hall Learning Systems, Inc., 1976. (P.O. Box 47X)

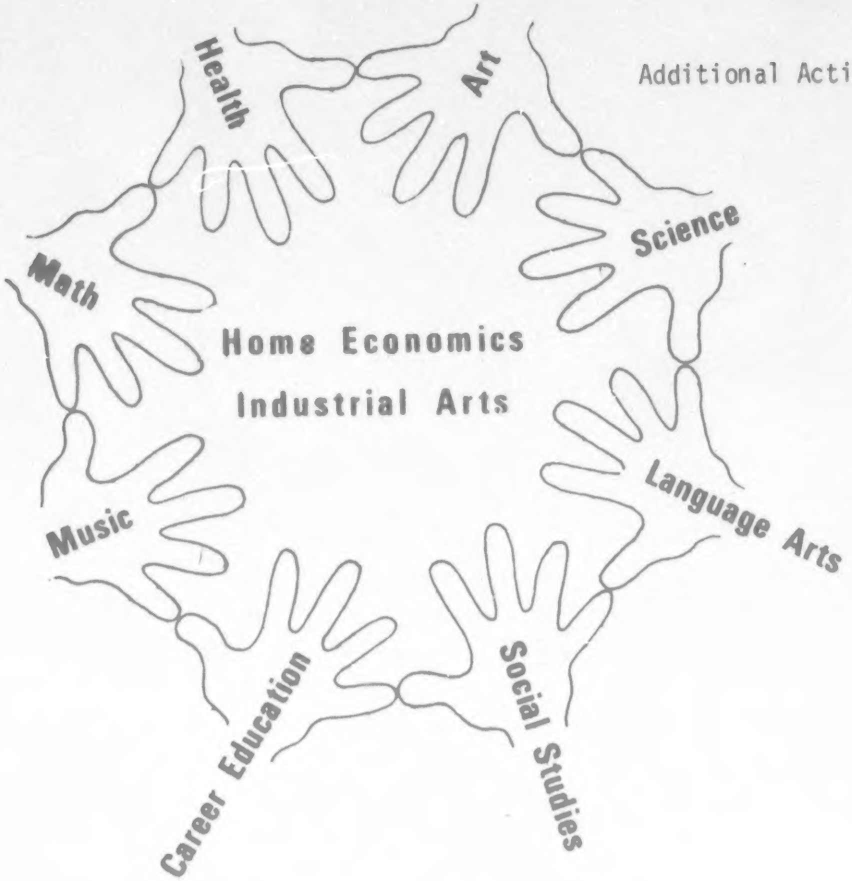
FOR THE STUDENT:

Baker, Eugene. I Want To Be An Architect. Chicago: Children's Press, 1969.

Greene, Carla. I Want To Be A Carpenter. Chicago: Children's Press, 1959.

The Little Carpenter. New Britain, CN: Stanley Tools, 1969.




Health
Art
Science
Math
Home Economics
Industrial Arts
Language Arts
Music
Social Studies
Career Education

Additional Activity Ideas

Hands-on Approach

wichita public schools
wichita, kansas

Activity Based Curriculum for Elementary Education

ACTIVITY BASED CURRICULUM FOR ELEMENTARY EDUCATION

ACTIVITY TITLE:

Ice Cream Delight

AREA TITLES AND MAJOR CONCEPTS:

Health
  Milk Group from Basic Four Food Group

Language Arts
  Oral language development

Math
  Metric volume measurement

Science
  Changes in liquids by temperature

DESCRIPTION OF ACTIVITY AND ENRICHMENT:

Each student will make their own ice cream by measuring and stirring individual portions in small metal cans.

SUPPLIES: (For class of 25)

Sweetened condensed milk (Eagle Brand) - 3 cans
Strawberry Pop - 5 cans (12 oz. each)
Aluminum foil - square for top of each can
Crushed ice - 10 lb. (4.5 kg)
Ice Cream Salt - 5 lb. (2.2 kg)

EQUIPMENT:

Metal 6 oz. cans - 1 per student
Recycled plastic containers - (example: large cottage cheese)- 1 per student
Plastic teaspoons
Pail for ice
Metric measuring cup
Spoon or cup (25 ml)
Clean Up Equipment
Can opener
Dipper for ice and salt

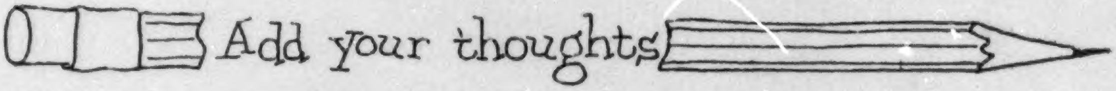
COPY RECIPE ON CLASSROOM CHART FOR ICE CREAM DELIGHT

1. Measure:

2. Cover with aluminum foil and set in plastic container.
3. Fill space with ice and salt.
4. Stir until it freezes.

TIPS TO THE TEACHER:

1. Pop and milk must be kept refrigerated until used to be cold in order for mixture to freeze.
2. Open condensed milk with can opener (not punch-type), since it is thick when cold.
3. Ask a parent volunteer to help with ice and salt during activity.
4. It takes more salt in ratio to ice than for a large ice cream freezer. Add a little water as you add ice and salt.
5. The milk has to be sweetened condensed milk (Eagle Brand) for this recipe.
6. Other flavors of pop to substitute for strawberry would be raspberry, black cherry, and grape.



ACTIVITY BASED CURRICULUM FOR ELEMENTARY EDUCATION

ACTIVITY TITLE:

Kite Making

AREA TITLES AND MAJOR CONCEPTS:

Art
  Craftsmanship

Health
  Kite safety

Language Arts
  Following directions

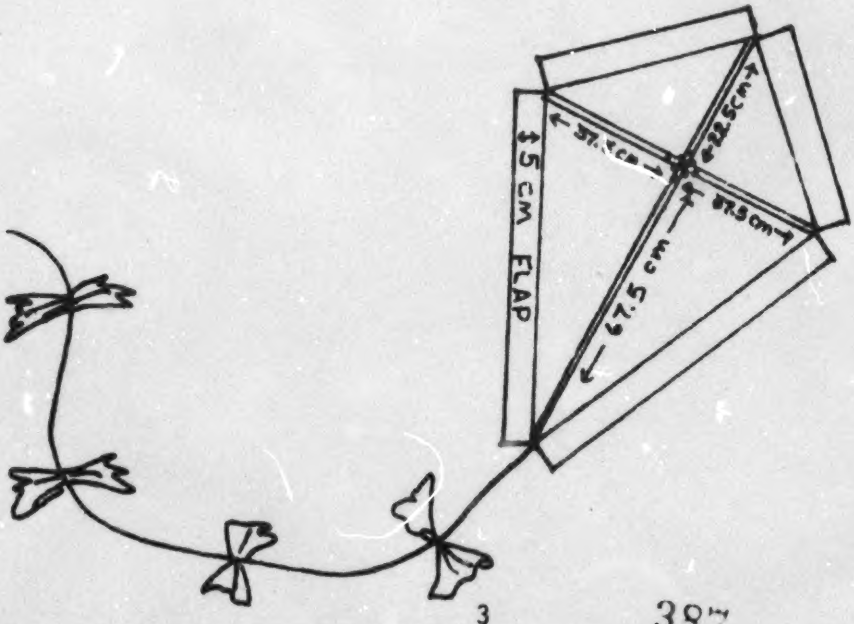
Math
  Metric linear measurement
  Area, weight, ratio, altitude

Science
  Wind and space studies
  Engineering - experimentation

Social Studies
  History of kites

SUPPLIES:

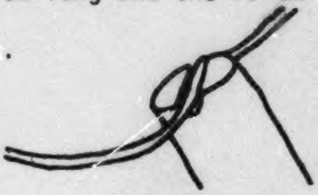
Dowels (.6 cm thick) - 90 cm long and 75 cm long
Paper or lightweight cloth - 90 cm x 100 cm
String



Making A Kite

1. Measure and saw 2 dowel rods; one 90 cm long and one 75 cm long.

2. Cut a notch in the ends of the dowels.



3. Place the two dowels at right angles. Bind the two pieces together with string.

4. Tie a loop in string and slip in top of notch. Make a frame by joining the four notches with this piece of string. Check for right angles where sticks cross with a square.

5. Place the frame on the paper or cloth and cut a shape 5 cm wider all around the frame. Cut out extra at corners. Fole the flap over the string and glue it down.

6. Tie a piece of string to the bottom of the kite for a tail. Tie to tissue paper every 20 cm. Experiment with the length of tail need for the kite to fly correctly.

RESOURCES

Hallamore, Elisabeth. The Metric Book. Woodbury, NY: Barron's Educational Series, Inc., 1974. (113 Crossways Park Drive.)

Hunt, H.M. and L. Hunt. Getting Started in Kitemaking. MacMillan, 1971.

Newnham, Jack. Kites To Make And Fly, New York: Penguin Books, 1977. (625 Madison Avenue.)

Raskin, Bruce. The Whole Learning Catalog. Palo Alto, CA: Education Today Company, Inc., 1976. (530 University Ave.)

PLEASE RECORD ALL BRAINSTORMS.

ACTIVITY BASED CURRICULUM FOR ELEMENTARY EDUCATION

ACTIVITY TITLE:

Printing - Set That Type

AREA TITLES AND MAJOR CONCEPTS:

Art
  Proportions, balance

Language Arts
  Written communications
  Creative writing

Social Studies
  Printing industry

DESCRIPTION OF ACTIVITY AND ENRICHMENT:

Each student prints a personalized message with a hand-set press. They will have experiences in writing and setting type.

SUPPLIES:

- Paper for printing
- Printers ink (water-soluble)
- Newspapers or brown paper for table
- Water for clean up
- Rags for clean up

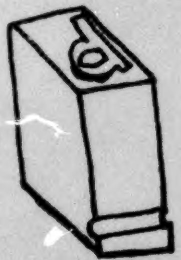
EQUIPMENT AND TOOLS:

Hand Set Letters Printing Press Set
  Includes:
- type case and type
- press bed
- 2 wooden wedges
- 9 type holders
- 9 wooden spacers
- brayer (roller)
- inking pad
- rubber pad
- rolling pin

A Word About Type

Metal type comes with the letters formed backwards. Getting familiar with the letters in their backwards form is easy...and intriguing. Here are a few hints.

Each piece of type has on its base a groove called a "nick." The nick marks the bottom side of the letter. It should always be toward you.



This letter is the lower case (small) "b." Several letters are quite tricky in this respect and may be confusing at first. Especially watch out for b, d, p, m, w, l, i, and j.

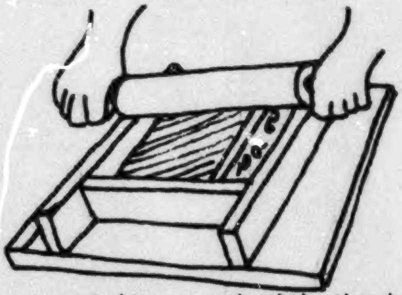
STEPS IN PRINTING:

1. Place metal type (letters) in wooden type holders. Use the spacers (blank type) to separate words and fill out lines. Tighten the screw to hold type.

   HINTS
   - a. *Take only one letter out of type case at a time to place in type holder. Remember, the words are to be backward--from right to left.*
   - b. *Keep the "nick" of tye type toward you.*
   - c. *Check each line when finished by using a mirror.*
   - d. *Make sure all letters are same height after they are in the type holder.*
   - e. *Over-tightening of screw will break wooden type holder.*

2. Place the type holders in the press bed. Fill up unused areas with wooden spacers. Use wooden locking wedges at each end. With a ruler, center type lines in the press bed.

3. Lay a printing sheet on top of the type. Lay the rubber pad on top of the paper and roll the rolling pin across the top. Add pieces of paper--21½ cm x 28 cm sheets folded--until the rolling pin rolls over each line of print with equal pressure.



4. Squeeze some ink on the inking board and spread it around with the brayer. Too much ink will make the copy blurred. The copy will be faint with too little ink.

5. When the brayer is coated with ink, roll it over the type.

6. Lay paper carefully on the inked type. Add rubber pad and the extra sheets that were used in Step #3. Roll up and back with rolling pin. Lift printed sheet up carefully. It will take a few minutes to dry.

7. Rinse the type off with water as soon as you are finished printing. Use a small brush to remove dried ink. Wash the brayer and the inking board, and dry with a rag.

Reference:

Kurth, Heinz. Print A Book. New York: Penguin Books, 1975.
(625 Madison Ave.)

PRINTING IS FUN ..... ENJOY YOURSELF

Cookie Shapes

ACTIVITY TITLE:

Shape Cookies

AREA TITLES AND MAJOR CONCEPTS:

Language Arts
  Oral language development

Math
  Geometry - shapes
  Counting

Science
  Sensory development
  Effects of heat

DESCRIPTION OF ACTIVITY AND ENRICHMENT:

The teacher makes a large batch of rolled cookie dough in class in order for the students to see the ingredients and mixing process. A classroom learning center is set up for students in small groups to roll dough, cut out shapes, and put on cookie sheet. The shapes may be made with cutters or designed by children on paper and cut out with a table knife.

SUPPLIES:

Sugar - 2 lbs. (450 g)
Margarine - 1 lb. (450 g)
Eggs - 5
Vanilla - 15 ml
Flour - 3 lbs. (1.3 kg)
Salt - 5 ml
Baking soda - 10 ml
Wax paper

EQUIPMENT:

Metric measuring spoons
Table knife
Wooden spoon
Metric measuring cup
Mixing bowls - 2 large
Rolling pins
Cookie sheets
Oven
Flour canister w/spoon
Sugar canister w/spoon
Cookie cutters
Spatula
Pastry cloths
Rolling pin covers
Oven mitts
Clean-up equipment
Liter pitcher
Trays

Sugar Cookie Dough To Make Shape Cookies

1. Mix together in large container:

   700 ml sugar
   450 g soft margarine
   5 eggs
   15 ml vanilla

2. In large bowl, stir together:

   2 L flour
   5 ml salt
   10 ml baking soda

3. Combine the two mixtures. It will be stiff, but this is necessary for rolling. It is used without chilling.

4. In the classroom learning center, use pastry cloths and rolling pin covers to eliminate sticking. Generously cover pastry cloth with 1 to 1 mixture of flour and sugar. Roll pin over cloth to work flour into pin cover.

5. Divide dough into balls. In small groups, children work in the center to roll out a ball of dough to approximately 7 mm thick and cut into shapes.

6. Place on ungreased cookie sheet.

7. Bake at 350°F (175°C) for 10 to 14 minutes.

TIPS TO THE TEACHER:

1. It will be easier for the students to transfer to cookie sheet if dough is not too thin.

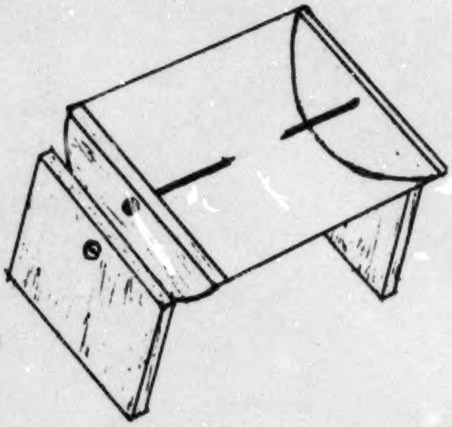
2. Powdered jello can be added in Step #1 of recipe for color and flavor. Use two 85 g packages for this recipe.

3. Baking time will vary according to thickness of dough and oven that is being used.

Jotting Space

ACTIVITY TITLE:

Solar Hot Dog Cooker



AREA TITLES AND MAJOR CONCEPTS:

Math
  Metric linear measurement

Science
  Solar energy - controlling and using
  Reflection, absorption, and radiation
  Properties of materials

DESCRIPTION OF ACTIVITY AND ENRICHMENTS:

Each student will construct a solar hot dog cooker from wood and aluminum to discover how man can use the rays of the sun to produce heat.

RELATED CAREERS:

Industrial Designer, Machine Tool Operator, Physicist, Construction Worker, Energy Specialist.

SUPPLIES:

1" x 8" pine lumber - each student needs 4' (122 cm) length
Thin gauge aluminum 34.9 cm x 30.8 cm per cooker
4" guttering nails (2 per cooker)
Small gauge 1/2" to 3/4" box nails - one dozen each
2" flat heat screws (2 per cooker)
1 box of aluminum foil at least 30.5 cm wide
Household glue
1 1/4" box nails (6 per cooker)

EQUIPMENT:

Metal cutting snips
7 oz. or 10 oz. claw hammers
Screwdrivers
Miter boxes with cross-cut saws
Try-squares
Meter sticks and centimeter rulers
Twist drill bits (diameter of gutter nails, and diameter of screw holders and cores)
Electric drills or hand drills
Framing squares
Electric saber saw or coping saws

FOLLOW UP IDEAS:

Have students use their cookers to prepare a lunch for the class and guests.

Have an energy specialist from an electric company discuss future uses of solar energy in our society.

Conduct experiments with the solar cookers.
a. Use thermometers to check heat of several cookers.
b. Take temperature at different times during the day to see if location of sun varies heat.

Write poems about solar energy.

HEALTH AND SAFETY PROCEDURES:

1. Discuss safety in the use of cutting tools.
2. Make students aware of sharp edges of the aluminum sheet.
3. Keep nails out of mouth.
4. Wear eye protection.
5. Keep gluing area near good ventilation.
6. Be careful of the type of glue used to bond foil to aluminum. Use sticks to smear glue, not fingers.
7. Avoid getting glue in eyes or mouth.
8. Caution students not to look directly into the reflection material of the cooker when in operation.
9. When removing hot dog, nails or foil could be extremely warm. Use a fork to remove hot dogs.

TIPS TO THE TEACHER:

It would be best if the teacher would premake the side pattern template and have students trace side pattern on their wood.

REFERENCES:

Energy Conservation, Experiments You Can Do...from Edison. Southfield, MI: Thomas Alva Edison Foundation, 1974.

Getting Started In The Classroom. New Brunswick, NJ: Curriculum Laboratories, Rutgers - The State University, 1974.

Solar Energy. Science Activities In Energy. Oak Ridge, TN: The American Museum of Atomic Energy/Oak Ridge Associated Universities. (P.O. Box 117)

Wells, Maureen. "How One School District Meets The Energy Crisis." Instructor. September, 1977, pages 182-188.

ACTIVITY TITLE:

Whose Bones? Making Life-Size Skeletons

AREA TITLES AND MAJOR CONCEPTS:

Health
Safety with tools and at Halloween

Language Arts
Vocabulary

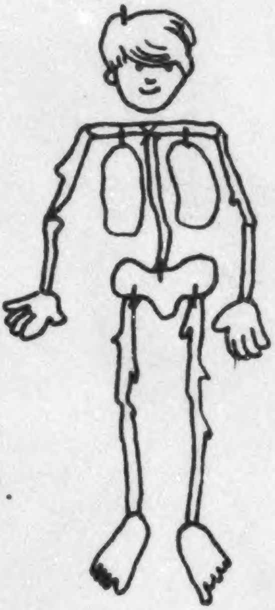
Science
Human skelelton

DESCRIPTION OF ACTIVITY AND ENRICHMENT:

Students construct life-size skeletons to explore bones and joints. Sticks or dead limbs are sawed to correct length for bones using metric tape to measure a class member for size. A hole is drilled in bones (stick) to add joints (string). The "bones" can then be painted white. Cardboard drawings of rib cage, hands, etc., can be cut and attached with string. The vocabulary and details of the skeleton will vary according to age of students.

SUPPLIES:

Small sticks or limbs
String
Cardboard
Pencils



EQUIPMENT:

Drill and bit
Saw
Miter box
Meter tape measure or meter stick

REFERENCE:

Lehane, Stephen E. Teacher. September, 1977, page 127.

ACTIVITY BASED CURRICULUM FOR ELEMENTARY EDUCATION

ACTIVITY TITLE:

Yum Yums - Uncooked Candy

AREA TITLES AND MAJOR CONCEPTS:

Language Arts
  Oral expression
  Reading A Recipe

Math
  Metric volume measurement
  Proportions, counting

Science
  Sensory development

DESCRIPTION OF ACTIVITY AND ENRICHMENT:

A classroom learning center is set up for small groups of students to rotate in the center. The recipe is an uncooked candy formed with the hands.

SUPPLIES: (Per batch)

Powdered sugar - 225 ml (1/3 lb.)
Margarine - 2 T (1/4 stick)
White corn syrup - 15 ml (1 T)
Food coloring - coordinate with flavor, such as green for mint
Flavoring - may use mint, strawberry, orange, lemon, etc.
Wax paper

EQUIPMENT:

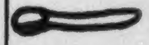
Table knife
Mixing bowl
Measuring spoons - 15 ml, 2 ml
Spoons for dipping powdered sugar
Metric measuring cup
Wooden spoon
Tray
Clean-up equipment

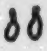
Yum Yums

1. Put 2 Tablespoons of butter

in a

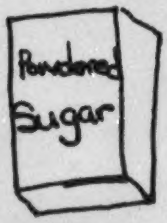
2. Add and mix:

 15 ml syrup

2 drops  food coloring

2 ml flavoring

3. Measure 225ml

of 

Put in bowl.

4. Stir and stir.

Take turns stirring.

5. Take a handful.

Squeeze it!

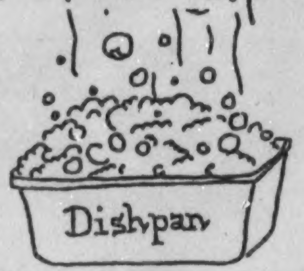
Do it again and again.

6. Roll a ~~small~~ piece into a ball. Make it about the size of a large marble.

7. Put your balls on a tray covered with wax paper.

Flatten and Chill

8. Clean up.



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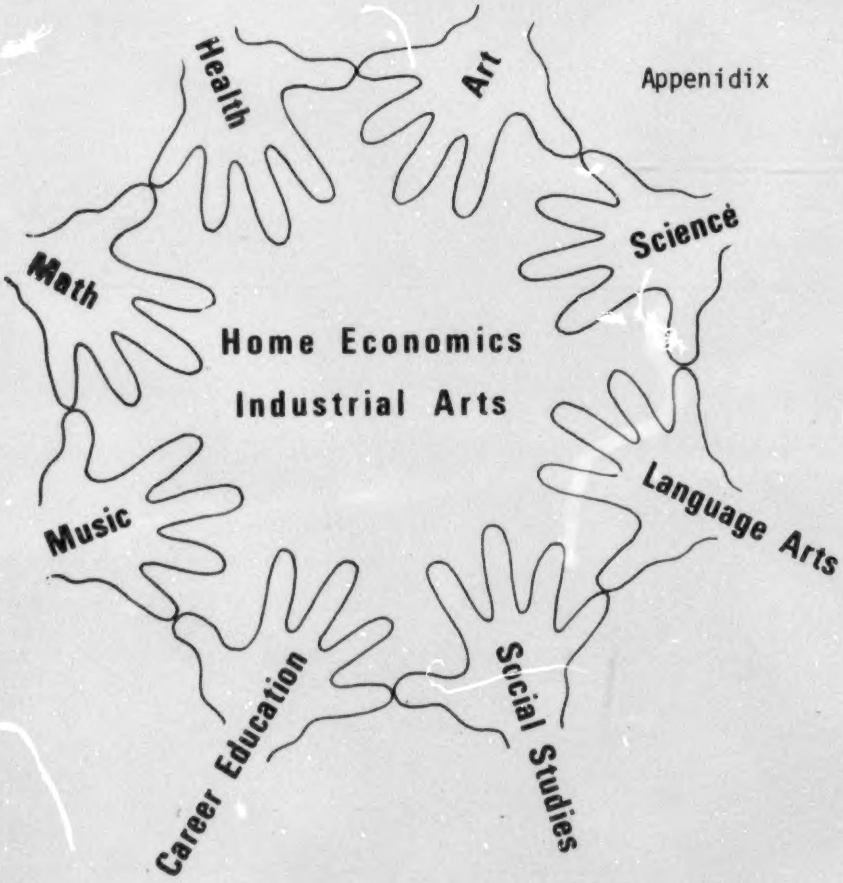
Health
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Music
Social Studies
Career Education

Hands-on Approach

wichita public schools
wichita, kansas

Activity Based Curriculum for Elementary Education

Game Directions for Nutrition Card Set, Titled - *Nourish*
(This may be checked out from ABC/EE office)

Crazy Calcium - 2 to 6 players.

Purpose: To become aware of the nutritional content of food and to show that all foods are not a good source of every nutrient.

Directions:
1. Each player draws a card from the deck. The card with the lowest calorie value determines the dealer.
2. The deck is shuffled. Seven cards are dealt per player. The remaining cards are placed face down in the center. Turn the top card over to form a discard pile. If this is a Calcium card, bury it in the deck and turn over another card.
3. Players lay a card on the discard pile that matches the top card in either food, percentage, or nutrient. If unable to play, a card must be drawn from the deck. If it matches, it may be played. It is then the next player's turn.
4. Calcium cards are "wild" and when used, the player must say which nutrient it represents. Wild cards may not represent a food or percentage.
5. The winner is the first player to discard all cards or is holding the least number of cards after the deck is exhausted.

Daily Tally - 2 to 6 players.

Purpose: To reinforce the importance of eating a variety of foods in order to include all the nutrients each day.

Directions:
1. Each player draws a card from the deck. The card with the lowest calories determines the dealer.
2. Shuffle the deck. A card is pulled from the center of the deck and left face down; set aside. This is the scoring nutrient.
3. Deal eight cards per player. Place the remaining cards face down in the center. Turn the top card over to form the discard pile.
4. Players take the top card from either the deck or discard pile. Discard one card.
5. To "go out," a player must hold eight different nutrient cards.
6. The player who "goes out" scores, using the percentage on their nutrient card that matches the scoring nutrient (Directions #2).
7. After each round, reshuffle the cards. Play continues with the winner being high scorer or one reaching 100%.

Nutrimites Fight - 2 to 6 players.

Purpose: To become familiar with the comparative nutritional content of foods.

Directions:
1. Each player draws a card from the deck. The player with the lowest calorie value becomes the dealer.
2. Shuffle the deck and deal all the cards.
3. Players place their cards, face down, in front of them.
4. All players turn up the top card from their pile. The card with the highest percentage scores 5 points for that round.
5. If any of the cards have the same percentage, a War is declared between those two players. The highest percentage of two new cards wins the War and scores 3 points.
6. Repeat Directions #4 and 5 for each round.
7. The winner is the player with the highest score after 10 rounds.

ACTIVITY BASED CURRICULUM FOR ELEMENTARY EDUCATION

Dear Parent:

As part of our ABC/EE program your child will have the opportunity to participate in hands-on projects in Language Arts, Math, Social Studies, and Science. Your child may be working with basic hand tools, small electrical appliances and tools, wood burners, carving tools, and/or sewing machines.

We will demonstrate equipment and take all precautions for their safety. You may also help by talking with your child about safety in use of tools.

In order for us to have an awareness that you do have a knowledge of your child's activities, we must have your consent before allowing your child to use any equipment.

The attached permission slip must be signed in order for your child to participate in our activities.

You are welcome to visit our classroom at any time during ABC/EE activities. Please feel free to ask any questions concerning this program.

I give my permission for ______________________________ to use the equipment and tools in the classroom ABC/EE activities.

____
(Parent or Guardian)

____
(Date)

RECYCLED EQUIPMENT AND SUPPLIES

DON'T THROW IT AWAY!

Item	Needed for Activities
Coffee Cans	Bread and Butter
Scoop from powdered drink mix (approx. 50 ml)	French Buffet *Hot Chocolate Mix*
Large cottage container and metal 6 oz. cans	Ice Cream
Foam meat trays	*Mini trays under ingredients to be measured*
Frozen whipped topping tubs large margarine tubs	Dip That Vegetable *Serving dips* *Storage for food staples* *Nail bins*
Greeting cards and small pictures	Wall Story Plaque
Knit fabric scraps	Drafty Crack Critters
Plastic milk jugs	*Carry water to dishpans*
Small buttons and sewing trims	Drafty Crack Critters Winter Festivals
Tree limbs 4 cm to 6 cm in diameter Plastic bread sacks	Bird Feeder
2 x 4 wood scraps, leftover latex paint and milk jug lids	2 x 4 Vehicles
Sunday comics of children in true-to-life situations	Metric Fun Events
Rags	*Clean-up for wood fini[illegible]nter*
Jute cord leftovers (2 cm lengths) and paper bags	Hanging Plant Holder
Miniature wild flowers that look like straw flowers (Broomweed)	Flower Cube
Yarn leftovers	String A Design Drafty Crack Critters Winter Festivals Stitch A Picture

RECYCLED EQUIPMENT AND SUPPLIES

DON'T THROW IT AWAY!

Item	Needed for Activities
Pop can tabs	String A Design Wall Story Plaque Nail Flower Plaque *Picture hangers*
Large baby food jars and fragrance leftovers	Bath Salts
Small baby food jars	Fall Pumpkin Adventures *Individual pudding*
Spray bottle	*With water and dish soap for cleaning tables*